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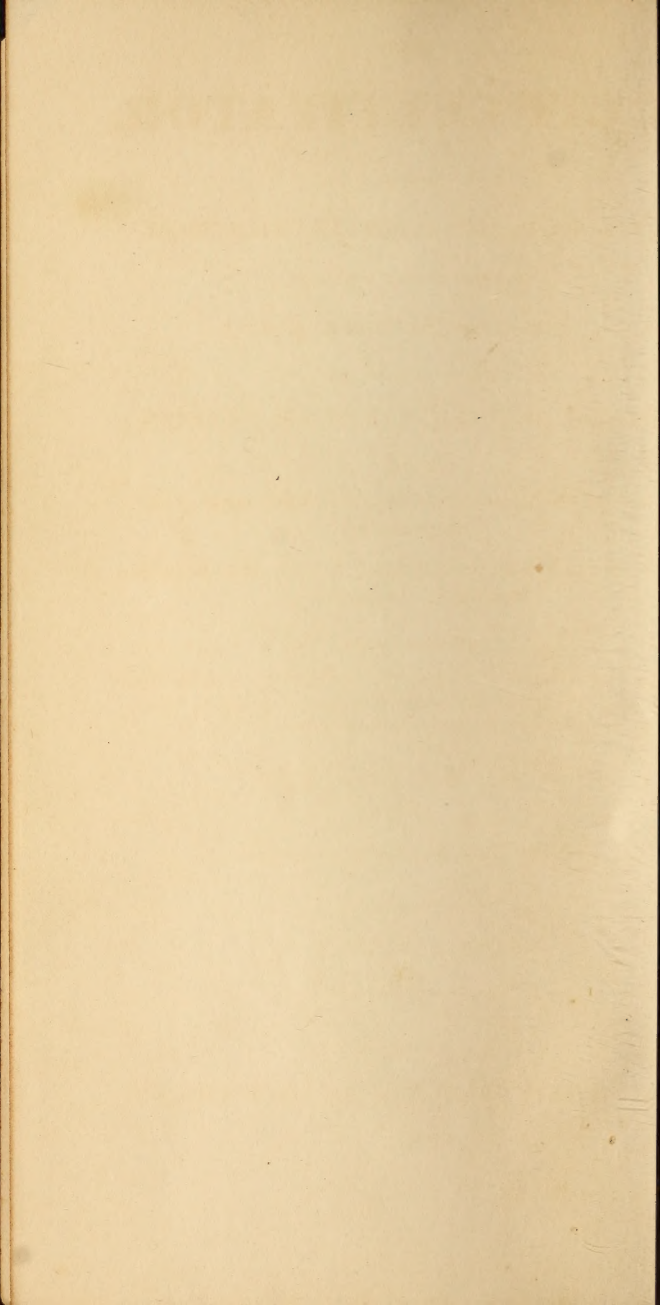
Chap.

SB 356

No.

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UNITED STATES OF AMERICA.



THE
FRUIT CULTIVATOR;

BEING

A PRACTICAL AND ACCURATE DESCRIPTION

OF ALL THE MOST ESTEEMED

Species and Varieties of Fruit

CULTIVATED IN THE

GARDENS AND ORCHARDS OF BRITAIN ;

WITH

*Directions for Raising, Choosing, and Management of the
Proper Stocks ;*

MODES OF PLANTING, TRAINING, FORCING, AND PRUNING,
THE TREES OR PLANTS ;

TOGETHER WITH

Directions for forming Fruit Borders, Planting Orchards, Building Fruit-
Walls, and all other Matters connected with the Propagation, Cul-
ture, Gathering, Storing, and Preservation of Fruit.

BY **JOHN ROGERS,**

Nurseryman,

FORMERLY OF THE ROYAL GARDENS.

THIRD EDITION.

LONDON :

JAMES RIDGWAY AND SONS, PICCADILLY.

1837.

THE

FRUIT CULTIVATOR

AND

A PRACTICAL AND ACCURATE DESCRIPTION

OF THE FRUIT TREES AND SHRUBS

OF GREAT

BRITAIN AND IRELAND

BY JOHN ROBERTS

WITH

ILLUSTRATIONS BY J. ROBERTS

AND J. ROBERTS

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THE FRUIT CULTIVATOR

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THIRD EDITION

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LONDON

CHARLES WOOD, PRINTER,
Poppin's Court, Fleet Street.

Ms. B. Oct. 4, 11,

TO
THE NOBILITY, GENTRY,
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AND
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Literary Testimonials to the Fruit Cultivator.

very useful and instructive hints.”—*Parson's Horticultural Register*.

“What more especially pleases us in this book, is its perfect freedom from pretension, and an utter absence in its pages of those ridiculous technicalities which have hitherto been the worst enemies to the progress of botany, and indeed of science in general. * * * Here is common sense applied to gardening; and we would strongly recommend our readers, who delight in gardens, orchards, pine-ries, and hot-houses, to peruse Mr. Rogers's unpretending volume.”—*Monthly Magazine*.

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“A plain, very useful, and practical guide to the cultivation of all our garden and orchard fruits. There is no part of the subject neglected; and from choosing and planting to gathering the best crops, we are taught how to proceed in a clear and instructive manner. Even if we had two seasons every year, as we almost have had in 1834 (for we picked from a second crop of raspberries this week), Mr. Rogers's work would only be doubly worthy of attention.”—*Literary Gazette*.

“Here the young gardener and the amateur cultivator need be under no alarm of betrayal by crude theories and speculative suggestions: they may come *at once* to the results of considerably more than half a century's daily experience, and so arrive at every thing that is beneficial in practice, or valuable as a system. * * * The oldest gardener need not be ashamed to con the pages of the *Fruit Cultivator*, and the youngest will find in them a complete treasury of knowledge. * * * We shall conclude our brief but cordial commendation of this *really useful* little volume, which is judiciously published at a price accessible to the means of a working gardener, by quoting the ADVICE with which Mr. R. closes his Introduction.”—*Nicholson's Commercial Gazette*.

INTRODUCTION.

THE cultivation of fruits, whether native or exotic, is a principal part of the business of the gardener; and, in many places, orcharding is an important branch of rural economy. Few objects are more engaging than the culture of fruit. The very act of planting a fruit tree is attended with a pleasing hope. Seeing it year after year advancing to a bearing state, is interesting; and witnessing it at last loaded with, or bending under, its burden of fruit, is at once as gratifying as it is a profitable spectacle.

Many books have been written on this subject; some of them, when the art was in its

infancy, and when sufficient experience had not matured the rules of practice. These have become obsolete: and there are also several modern publications of great merit, in which science and extensive practical knowledge have been united; which have gained public approval and patronage; and as these embrace every branch of the fruit-grower's duty, may on this account be deemed complete. But such is the vast variety of garden and orchard fruit,—such the diversity of circumstances which affect the growth of the trees, the size and qualities of the fruit,—and such the great number of new sorts and new modes of treatment discovered,—that no one book can possibly contain a moiety of the knowledge necessary for a general cultivator. Nor can a complete work on the subject ever be compiled, unless every man of long experience do for himself and the public what the Author of the following pages has endeavoured to perform.

He has, during a long life of varied and active employment, made and kept notes of the results of his practice; and which he now, in his eighty-third year, is induced to offer to the young gardener and nurseryman, as a fund of information which he trusts will not be found unworthy of their notice.

The book differs from many others which have preceded it, chiefly in this, — that, whereas former works only give general directions as regards the management of the different species, this enters into minute details, not only respecting the species, but of every variety and subvariety which the Author has found to be really worth cultivation. The whole is derived from actual practice; and nothing advanced, of which the Author cannot vouch for the truth. He has employed the plainest language, as he disapproves of the use of botanical or scientific terms in the descriptions of fruit, or of any matter relative

to the culture: in fact, all practical matters cannot be too plainly treated of. Were the Writer disposed to be critical on this head, he could point to instances where much very fine language has been thrown away, in describing one of our commonest apples; but as this is unnecessary, he has studiously avoided every term, the import of which may not be understood by the meanest capacity. For the same reason, he has avoided all allusions to the physiology of trees; not only because the doctrines of that science are not very well defined, but some of them actually contrary to nature. For instance, what is said concerning the autumnal descent of the sap, — a circumstance which the Author has never observed, nor can he bring himself to believe ever takes place.

The book might have been much enlarged, if the Author could have been persuaded to have added opinions and practices borrowed

from others; but this would have been an imposition too often practised, but which is, to say the least of it, very unfair. And without pretending that all that is herein detailed is original, or exclusively his own, he can affirm, that such as it is, if duly attended to, may be depended upon as *main-chance practice*, leading to no disappointment.

He might have also added to the bulk of his book, by relating all he knew of the many leading characters as gardeners and nurserymen, who flourished in the last century—contemporaries of his earlier days. This might have been interesting to some few readers; but as such matters are not immediately connected with the main purpose of the work, they have been suppressed; except a few anecdotes which the Writer could not well withhold, connected as they are either with the fruit described, with some rule of practice enjoined, or as examples of successful exertion

or eminent ability. The memory and services of such persons should be kept on record, as well as a mark of honour to the defunct, as an incentive to the rising generation to tread in their steps.

In concluding these introductory remarks, the Writer has to add a piece of advice to his young readers, which, as he found it of much use to himself, he can recommend the more confidently. It is this:—in whatever place, station, or situation, a young man may find himself placed while in pursuit of his business, always to keep a diary or register of the various labours done by himself or his companions for every day in the year. Such a book of memoranda, kept with steadiness and care for three or four successive years, will form a body of practical information which will be of the greatest service to the possessor to the last hour of his professional life. A calendar of the weather should be kept at the same time;

because this frequently expedites or retards the operations of the gardener, and on it depends the time of growth and period of maturation of all garden crops. It is from numerous memoranda of this kind, made in early youth, that the Author has been enabled in his riper years to arrive at sound conclusions, and in his old age to offer them as a bequest to those who succeed, when "he shall be no more."

J. R.

Southampton Nursery,

October, 1834.



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THE FRUIT CULTIVATOR.

SECT. I.

OF THE ALMOND.

THE almond is the *amygdalus communis* of botanists, found originally in Persia and surrounding countries, whence it has been long since introduced into all the countries westward, on both sides of the Mediterranean, and ultimately into England about 1548. Two sorts only are cultivated in Britain, *viz.* the sweet or Jordan almond for its fruit, and the bitter almond as an ornamental tree, than which no other is more conspicuously beautiful in early spring.

The sweet almond is treated as a wall tree, being pruned and trained as peach trees are. But from its tender habit, and the liability of its flowers being killed by frost, it seldom bears; and even when it does, the produce are far inferior to imported fruit. The tree should be planted on a south aspect, and requires a good rich loamy soil, full eighteen inches deep, and on a dry subsoil. As the tree approaches

the bearing state, it will be observed to produce numerous spurs; which, as they are generally thickly set with blossom buds, should be carefully preserved. These spurs bear the best fruit; but as the latter are liable to be too much crowded together, they must be timously thinned. The almond not only resembles the peach in its general habit, as to manner of growth, form and colour of flower, and foliage; it is also subject to the same diseases and attacks of insects, which are to be prevented by the same means as is advised for the peach, hereafter to be noticed.

The author never had but two trees under his care, and treated as fruit-bearers. One was worked on an almond stock, which lasted but for a few years. While in health it blossomed well, but produced very few ripe fruit. The other was on a plum stock, became a thrifty tree, and lasted much longer. But from the little experience he has had of almond culture, he refrains from offering his own practice as a rule; acknowledging that much more might have been done in protecting the flowers if he had thought the fruit were worth the trouble; his opinion being, that they are the least valuable of all our wall fruit, more especially as they can be so cheaply purchased of the grocer.

In the management of the fruit, the author advises that they be allowed to hang on the tree until the rind becomes brown, and the kernels firm and solid. Under these circumstances they may be gathered, divested of their outer coat, gently dried till the shell

be sufficiently hard, and then put up in white paper bags, and kept in a dry airy place for use. The almond is always seen in the dessert, is useful in medicine, and extensively employed by the cook and confectioner.

The bitter almond is supposed to be a variety of the above, or of some other sort. It flourishes in any kind of light soil; disliking heavy loams or clays, where, though it may grow vigorously for a few years, it ultimately cankers off. Both this and the sweet almond are successfully raised by being budded on the muscle plum stock, which, being a durable, healthy stock, forms very fine headed trees in a very few years.

SECT. II.

OF THE COMMON APPLE.

THIS well-known fruit tree is the *pyrus malus* of botanists, and certainly the most useful of all others cultivated in Britain. Its characteristics of hardiness, beauty, wholesomeness of its fruit, whether as agreeable food, or for its juice as refreshing drink, the earliness of some varieties, and the long-keeping properties of others, render the apple one of the choicest gifts of nature.

It is probable that we are indebted to the French and other nations on the continent for the first introduction of apples into England. The wild crab of our woods and hedges, is the only fruit of the kind of which this country can boast as being indigenous. From this, however, all our improved va-

ieties of the apple have been, here or elsewhere, obtained. For it is to be observed, that the cultivated apple is not the produce of any soil or climate, but owes its existence to human art and industry.

How long before the reign of Henry the Eighth apples had been cultivated in England, cannot be determined; but it was during that king's reign that *pippins* are first mentioned; since which time the varieties have increased rapidly, more especially during these last thirty years. About the beginning of the present century, a nurseryman of the name of Dredge (of whom but little notice has been taken, though entitled to great praise), was particularly successful in raising new varieties of apples from seed, seven or eight of which still go by his name. But these were few compared with the numbers since brought into repute, principally through the indefatigable exertions of T. A. Knight, Esq., the respectable President of the Horticultural Society of London. This gentleman possessing a great fund of sound practical knowledge, and aided by profound physiological science, has given to the country a number of very fine varieties of fruits. Two other gentlemen, J. Williams, Esq., of Pitmaston, and the late — Braddick, Esq., of Bury Hill, prompted by the advice and success of Mr. Knight, and following his processes of cross impregnation, have also succeeded in originating some valuable kinds of fruit, as well as establishing some rules of practical gardening which are very generally adopted.

Here a remark may be made in passing, that, not-

withstanding the many new sorts of apples which have lately been produced by art, not one surpasses, or even equals, two of the oldest varieties in our orchards, *viz.* the old golden pippin and nonpareil for the table, or the old royal russet for kitchen purposes.

The author is well aware that there are many very good apples lately brought into cultivation, which are not noticed in the following descriptive list ; indeed, many which are described and figured in splendidly illustrated works* : but he flatters himself that those which he has selected and described, will be found a sufficiently extensive collection to choose from ; and particularly as all the sorts figured, as well as those recommended by the Horticultural Society, may be had at the Southampton Nursery, now carried on by the author's son, who has bestowed the utmost care in propagating the true sorts, in order that the public may not be disappointed in obtaining the best kinds of fruit. Many other nurserymen connected with the Horticultural Society have proceeded on the same plan, and it may be truly affirmed, that our present collections of fruits illustrated and described by former writers, and as the author of these pages trusts together with the descriptions which follow, are more perfect and complete than ever were before known in these kingdoms.

* The POMOLOGICAL MAGAZINE, emanating from the Horticultural Society of London, illustrated by 152 coloured figures of the finest fruits adapted to the climate of Great Britain. Three volumes royal octavo.

The above being premised, the next subject to be adverted to is one of very material consequence, namely, the choice of stocks most congenial to, and suitable for different species and varieties of fruits, as well as most proper for the character of the tree about to be propagated. There are free and dwarfish growing stocks: the former should be chosen for standards, and in all cases where the trees are wished to grow large; the latter, when dwarfs or low growing trees are required, or when it is necessary to use them in order to correct the over-luxuriant habit of the grafts or buds to be inserted thereon.

The stocks which experience has proved to be the most suitable for the various kinds of apple are as follow.—

The Crab Stock—Is allowed by all cultivators to be one of the best; not only because it is naturally hardy and durable, but because it is less liable to suffer from canker. These stocks are procured by gathering fruit from the most healthy trees found wild in the woods; extracting the seeds; keeping them dry until the time of putting them into seed-beds in the nursery. Another stock recommended by Mr. Knight is also found very useful, especially in cold situations or climates. This is raised from seeds of the yellow Siberian crab, and promises to be a very proper stock for many of our smaller sorts of table and cider apples.

The Tree Stock—Is raised from the seeds of any kind of cultivated apple. Much more care is necessary in selecting these seeds than is usually bestowed.

In this country they are too often sowed, and raised promiscuously : a plan by no means to be approved. The French orchardists, particularly in Normandy, are very careful in keeping their tree-stocks separate ; and working upon them only such sorts as they think will best answer the end in view ; that is, uniting early grafts with early stocks : late sorts upon stocks raised from late varieties, &c. By such means the real character of the different kinds is kept more pure, both as respects quality and long keeping properties, a practice well worth imitation. The next to be mentioned is —

The Paradise Stock.—How the name originated has not come to the author's knowledge ; but it is a most suitable stock for dwarfs and espalier trees. Its own fruit is of no value, and is therefore universally employed as a stock. By all accounts it is of Dutch origin ; though it first found its way to England through France. It has however been long ago proved by the late Mr. Grey, of the Fulham Nursery, that the French is inferior to the Dutch paradise stock, especially for espaliers. For this purpose, and for dwarfs in small gardens, this stock is most eligible ; though the author is of opinion that it is less durable than the crab.

The French Stock.—This is a very diminutive growing plant, and is chiefly used for trees intended to be kept in and fruited in pots. This method of growing apples is practicable ; but even when successful, the trees with their fruit are more objects of ornament for tables at great entertainments than of

any real use : the fruit being both mealy and flavourless.

This stock as well as the paradise are best raised from layers, particularly the Dutch, few of the other being raised in this country, in consequence of the facility with which any quantity can be had from the continent. The paradise stocks affect a moist, rather than a dry soil.

Of the Soil.—The successful culture of the apple depends very much on the suitableness of the ground they are planted in. The size and flavour of the fruit, the general health and duration of trees, is most commonly the result of good or bad soil. Climate and situation also affect both trees and fruit ; but not in the degree in which the same are affected by the qualities predominant in the land. Of all the different descriptions of soil to be met with in these kingdoms, that of a soft hazel loam, containing a small portion of sand, seems to be the most congenial to the apple generally. In such soil the tree is seen to flourish longest, is most productive, and remains freest from disease or attack of insects. A great depth is not requisite ; eighteen or twenty inches being quite enough, provided it be on a dry subsoil of chalk or loose rock. If the bottom be wet, the trees should be planted high, and every means taken to drain the ground. A wet bottom of gravelly clay should be avoided if possible : no kind of apple thriving long if the roots once enter into such a cold substratum.

Deep rich soils in sheltered situations are not the

most proper for the apple, though such have been most erroneously recommended by writers who ought to have known better. For it is often seen that apple trees succeed well in any kind of loam, though it be not more than one foot in depth, so as the bottom is sound and dry, the roots take an extensive horizontal range, the young wood is always of more moderate growth, and better ripened than where roots strike deep into the ground.

Although local circumstances often control the wishes of the planter, compelling him to fix on a site where the soil may not be exactly like what is recommended above; he must, in this case, endeavour to make the soil by trenching, draining, and by addition of the qualities wanting, bring it as near to the standard as possible.

Of the Situation and Aspect.—The situation of an orchard should neither be in the bottom of a narrow valley, nor on the top of a hill: in the first, the bearing wood is never so well ripened, the buds are often too early excited in the spring, and there, frosts are always more intensely felt; in the second, fruit-bearing trees are always too much exposed to winds. The most desirable site is the side of a hill which slopes gently to the south, or south-east. If higher ground or a belt of forest trees bound it on the north, it is an advantage, as yielding shelter, often necessary to break the cutting winds of March and April. A western aspect is not to be preferred, because of the violent gales often experienced from that quarter; more especially during the months of

March, when the buds are swelling, and in September, when many of the trees are loaded with fruit. If, however, a western slope be the only choice (other circumstances of soil, &c., being favourable), the planter has only to take care that the fruit trees be protected by screens of forest trees on the exposed points. This may be done, in a great measure, by the fruit trees themselves, that is, by planting the hardiest kinds, and tallest growers, on the north or windward sides, and placing the more delicate and lower growers towards the south.

Apple Trees on Walls.—Some of the tenderer sort of apples are brought to great perfection by being planted against, and trained to, walls. Some of the more choice table kinds cannot be thoroughly ripened unless upon walls, especially in the northern parts of our island. The south, east, and west aspects are suitable for one sort or other, and it has been observed, that the fruit are not only higher flavoured, but attain to a larger size than they do either on espaliers or standards. Such sorts as require a wall will be noticed as they occur in the catalogue following.

It may be mentioned in this place, that when an orchard is about to be planted, the planter, in making his choice of the sorts he wishes to cultivate, from this or any other published catalogue, should not forget, at the same time, to look round his immediate neighbourhood, to see which sorts succeed best in his district; because the different sorts of apples, as well as other kinds of fruit, have *local propensities*,

as it may be called, which render them more thrifty and prolific in one place than in another. Such a circumstance is always worthy the attention of the orchardist.

Planting an Orchard.— Before proceeding to give directions on this business, the author wishes to guard young planters against being imposed upon, and frightened out of their senses, by representations in learnedly-written books, regarding the preservation of the fibrous roots. These fibres are called *spongiols*, from the old Latin name given to the roots of asparagus ; but in the books alluded to, the word is only used, the author believes, as a conventional term, to distinguish the active, food-imbibing fibres from the main body of the root. This distinction may be all very well ; but these learned physiologists, attending more to the *functions* of these fibres, than to practical facts, attribute to the loss or destruction of them all the failures which take place in the business of transplantation. In this, the man of science is at fault ; because the practical man knows, that leaves on the head of a tree are produced at the same time as the fibres are on the roots ; and, in many cases, both *fall off* together. The root fibres (or spongiols, if the learned must have it so) of the apple, do not, indeed, all fall off, but certainly all become inert and torpid during winter. Besides, it is not altogether to the preservation of the last year's fibres that the planter looks for success : nor can the transplanted tree be much benefited by saving those organs, which have already done their duty. Both

the one and the other must rely on the *new* vigorous fibres which *will be produced* in the new station ; and if a removed tree be planted in soil which is fine, moist, and warm enough, no fears need be entertained but that new fibres will quickly come forth to carry on the growth of the plant. In transplanting a tree, however, there is no necessity for uselessly exposing the roots to the sun and drying air ; this might enfeeble the *main roots*, which would be of worse consequence to the plant than the mere loss of the spongiols, a majority of which would certainly have died, even if the tree had been allowed to stand in its former place.

That the soil in which a tree is planted should be sufficiently moist, has already been stated ; it is, moreover, absolutely necessary that care be taken to keep it so ; either by mulching the surface above the roots, or by giving water occasionally, as the state of the trees or weather may seem to render necessary.

It has been before observed, that the staple, or surface soil of an orchard, need not be double-digged or trenched deeper than from twelve to twenty inches. The trees should be put in rows, ranging from north to south, that the mid-day sun may shine along the intervals. The openings made to receive the trees should be sufficiently large to allow the roots to be spread out in their natural positions ; and much care must be taken that the roots be not placed too deep. On this last point, the author cannot sufficiently press on the attention of his readers the great

importance of this rule in planting fruit trees. The consequences of deep planting are, unkindly growth, canker, and barrenness. Many extensive orchards have been utterly ruined by mismanagement in this particular ; and where trees of ten or twelve years' standing appear to be suffering from this misfortune, better it is to have the whole taken up, and replanted properly, than allow them to remain unprofitable encumbrances on the ground. The nature of the subsoil, it is necessary to repeat, should also be well considered ; if very wet, whether clay or gravel, the trees should be planted proportionably higher, even on the surface, rather than run the risk of the roots getting too deep, which they are apt to do in dry summers, in search of moisture. So much has this circumstance been dreaded by orchardists, that the author is acquainted with one instance, in which an extensive orchard, belonging to an ancient priory, was completely paved with stone under the trees, to prevent the roots descending into the wet subsoil, and with the best effect.

The roots of fruit trees should always be invited to keep near the surface ; this can only be done by applying top dressings of suitable compost ; and not discouraged or disturbed by the spade for the purpose of raising surface crops of annual vegetables.

General Management of Apple Trees.—Much of this branch of the subject will be imparted under the different kinds described in the catalogue. We only stop to mention here, that as the roots are found more durable than the head, the latter may be re-

peatedly lopped, or pruned in, to cause the reproduction of new branches, and which, upon trees that have ceased to bear, is often a great improvement. The author thinks, that as this was an idea of the great Lord Chancellor Bacon, it furnished the late royal gardener, Mr. Forsyth, with a foundation of his system of pruning and healing the wounds of trees ; both of which are useful in the management of fruit trees.

Knife-pruning is necessary in the early stages of the growth ; irregular branches, or redundant shoots, may be cut away, regarding always the peculiar form of growth of the sort to be pruned ; for this “ it will always assume,” as Mr. Knight has truly said, “ in spite of the pruner’s art.”

Seedling apples come into bearing at different periods ; some so early as the fourth year ; others not till they are about fifteen years old. Seedlings may be forwarded into a bearing state, by repeated grafting them upon themselves, keeping them on poor land, and giving no pruning.

The great quantities of apples imported from France and America, is certainly a national loss ; more especially as there is so much vacant British ground, well calculated for the growth of the apple, now lying waste.

Training. — Apple trees may be trained either as dwarf or high standards ; in the fan manner, or horizontally on walls, or as espaliers, with upright stems and drooping branches, &c.

Standards are such as are planted in orchards or

gardens, having an upright stem free from branches, six or seven feet high. The stem may be formed either of the stock or of the graft; the latter is the most common practice. The forming of either dwarfs or standards belongs exclusively to the nurseryman, who feels bound to supply his customers with whatever form, as well as every kind of fruit they may desire. Tall-stemmed standards are sometimes planted against walls, to fill up the vacant spaces at the top between the dwarf trees which cover the bottom; in this character, they are called *Riders*. The nurseryman forms standards, however, chiefly for planting in orchards, where cattle are depastured, or in the open garden, where under-crops are raised. Standards are also much planted in hedge-rows, in some parts of the kingdom; and although it be not a good custom, as regards the safety and completeness of the fence, it is a profitable one in many respects; more especially in grazing countries, or on arable farms, where it is the custom to leave green headlands. In cider manufacturing districts, the hedges are full of apple trees; and are to the tenants a source of considerable income, on which they very much depend, as well for paying their rent, as for much domestic comfort. Hedge-row fruit trees are established in two ways. Some prefer buying trees of a nurseryman, and plant them at once close behind the line of the hedge, and at proper distances apart (say from six to ten yards). Others plant the stocks in the first place; train them up standard high, and then graft them with the desired

kinds ; — either way, carefully executed, generally succeeds.

Fruit trees, planted and trained as espaliers, is a plan long ago borrowed from the French. It is a neat and convenient method, especially in small gardens ; occupying but little space, and, at the same time, serving the purpose of a screen, a fence, or a boundary to the different compartments of a garden. Dwarf maiden trees are preferred for espaliers, and are either trained in the fan manner, or with an upright central stem, with branches led off in opposite pairs, horizontally. The latter method is most commonly adopted ; it being most symmetrical, and withal the easiest to give, and most suitable for training upon the rails, as they are usually constructed. The most simple kind of espalier rail is composed of straight six feet stakes, driven into the ground, at about a foot apart, connected by a saw-cut fillet, or ledge, along the top, which is nailed to each stake. When the stakes are driven, and the fillet nailed on, the latter should be about five feet high—more or less, however, according to the size of the garden. Espalier rails are also formed by the carpenter, of squared scantling, painted, and have a very neat appearance. A still lighter frame is formed of flat iron uprights (fixed in wood pattens), and quarter-inch horizontal wires, along which the branches are trained.

Training on trellises is also a favourite scheme in French gardening. Even the walls about Montreuil are covered with trellis work, at some distance from

the face of the wall, and on which their finest-flavoured apples are produced. Under the impression that this situation of the bearing wood was in a kind of mitigated temperature, suitable for maturing the fruit, the late Earl of Holderness, when in possession of Sion Hill, near Brentford, had all his extensive south wall trellised, according to the continental method, and had also a Dutch gardener to manage the trees. But neither the idea of the Earl was realized, nor the skill of his gardener effectual; after a fair trial, the plan was abandoned, the trellis removed, and the trees placed close to the wall, where they flourished, and bore fine crops. A good reason, perhaps, may be given for the different effects of the French and English treatment. In the former country, the heat reflected from the wall might be too intense for the fruit in close contact with the face of it; whereas the heat from the wall in England was only in the requisite degree.

Although trellises are in universal use in British hot-houses, and this chiefly because the smoke-flues are usually built behind them, yet the author does not think this arrangement absolutely necessary; on the contrary, the most successful peach-forcing he ever witnessed was in houses built for the late Earl of Thanet, at Hotheld, in Kent, from a plan furnished by a Mr. Shiels, a nurseryman of some note, near London. In these peach houses, the trees were planted close to, and trained on the bare wall, and no trees in the kingdom did better, or yielded finer, high-coloured fruit. This circumstance is mentioned

as a hint to those employed in building hot-houses, to consider, in all cases, how far a trellis may, or may not, be necessary.

Resuming the description of espaliers, it should be added, that the trees, in whatever form they may be trained, require the same care and style of pruning as do wall trees; and, for many kinds of fruit, answer equally well. The celebrated Sir William Temple had extensive espalier grounds, at Sheen, near Richmond, in Surrey. A fine assortment of both apples, and particularly of summer and autumn pears, were collected on the continent by Sir William, for his garden at Sheen. The trees were planted in parallel ranks, running east and west, many of them on English stocks, and which uniformly produced abundant crops for the space of eighty years, before the orchard was destroyed: the ground being purchased in the year 1772, by the crown. Another instance of successful espalier planting, was that belonging to Mr. Secretary Johnston, at Twickenham, which towards the end of the last century bore prodigious crops of fine fruit, both pears and apples. The trees were of English growth; the apples worked on the crab, and the pears on the pear stock.

By proper pruning, disbudding, stopping the laterals, and encouraging the leaders, espalier trees may be extended to a great length of branches. One is described in the *Gardener's Magazine*, which measured, in 1831, ninety-nine feet from one extremity of the branches to the other, and with every sign of extending itself farther. It is also a great bearer,

and has been planted upwards of forty years ; is a kitchen fruit, and known by the name of the Dove-ridge Nonsuch.

Dwarf Apple Trees are such as are worked low, and upon paradise stocks, to correct an over-vigorous growth. They are intended for walls, espaliers, or for the borders in kitchen gardens, where they are wished to grow like low round bushes ; or trained in any dwarfish form. The knife management is simple, consisting of a due regulation of the branches at first, by disbudding, shortening, or cutting out redundant shoots. Such dwarfs generally begin bearing on the third or fourth year, after which they seldom require much pruning.

Dwarfs are preferred for planting in high exposed situations, and more especially upon the western sea coast, where strong sea breezes prevail. So as the branches are out of the reach of sheep, is all that is necessary ; and these low squatting trees seldom miss yielding plentiful crops.

Dwarf trees (and if pears, on quince stocks) are also trained after two French modes. The first is called hoop-training ; that is, a circle of stakes, five or six feet high, are driven round, and about two feet distant from the stem of a tree two or three years old from the graft ; the branches are led and trained round the outside of the stakes, in a kind of spiral manner, till they gain the top. A hoop is tied round the tops of the stakes to keep them in place ; and when covered from bottom to top with bearing wood, the trees have a very dressy appear-

ance. Another mode of training is said to be like a distaff, that is, like a cone or sugar-loaf; the lowest branches, proceeding from an upright stem, are longest, and trained in a drooping position towards the ground; the next set of branches above hang in the same position, but are shorter, all the rest above diminishing as they rise, the uppermost finishing in a point. This is a very ornamental mode of training, and when the trees hang full of fruit, a very pleasing sight. For all kinds of dwarf training, young trees, two years from the graft, should always be chosen. At this age, the nonsuch, Ribstone pippin, Quarendon, Dutch codlin, and pomme violet, are often fruitful, and should always be in the collection of a small garden, in order that as much variety as possible may be had on a limited space.

As the greater part of the foregoing observations are introductory to what the author considers to be of more practical value, *viz.*, faithful descriptions of all our best hardy fruits; he would beg to intrude a few minutes longer upon the time of his readers, while he adverts to two other matters, which, though not strictly appertaining to the culture of fruit trees, may assist and enlighten the minds of some of the young cultivators, for whose sake the whole book was projected, and for whose benefit all the practical rules are set forth in the plainest language, and most familiar style.

The first thing he would detain his young readers with, is the names of the books he would recommend to the particular notice of the orchardist and young

gardener; those, whence in his earlier years, and in his riper age, he has derived amusement and much information. The first book he would name, is a *Treatise on Planting and Gardening*, by J. Kennedy, uncle of Mr. Kennedy, of the late firm at Hammer-smith, gardener to Sir Thomas Gascoigne, one of the most munificent patrons of horticulture of his time. The second edition of this little work was published in 1777, and no doubt has now become scarce. Though old and plain, it is truly excellent.

The second is a practical work by Mr. Harrison, gardener to the earl of Egremont. Although his method of disbudding and pruning is rather complicated, his system is good, and well worth the attention of every young man, who should endeavour to see it practised if possible.

The third is by the late Mr. Forsyth, highly valuable for its straight-forward plainness and intelligibility. Its chief merit is his plan for the renovation of trees after they have ceased to be thrifty and fruitful. All that is advanced well deserves the regard of all those who have orchards of old trees going to decay.

Besides the above, there are two publications on most parts of gardening, and consequently useful as calendars; *viz.* Abercrombie, as improved by Main, and that of M^r Phail. Both should be in the library of the young gardener; and to which he should certainly add, if he can, Loudon's *Encyclopædia of Gardening*,—a little world of information in itself; and certainly the cheapest work ever published, con,

sidering the plates and quantity of matter it contains. A new edition is now publishing in monthly numbers.

A general system of gardening, as far as regards fruits and culinary vegetables, was long projected by the author, and submitted to the opinion of competent judges, by whom the plan was approved; but other avocations engrossed his time so entirely, that he was obliged to relinquish his design; and instead of a large work, the present small one has been brought forth in its stead.

The author also feels inclined, among other introductory matter, to give a few slight notices of his opinions of the former and present systems of botany. He is not a botanist himself, though a great admirer of the science, as it has been illustrated both by Linnæus and Jussieu. Of Linnæus he has the very highest opinion, although not altogether blind to the defects of his system. Without wishing to appear as looking for "spots in the sun," he would humbly suggest whether the pear be not a distinct genus from the apple, and the plum from the cherry. These trees have no affinity in their physical or essential qualities, and but little in the fruit. They are certainly much more distinct than many others which Linnæus had arranged together, and which are now separated by modern botanists. But this is more a practical than a scientific remark, and is only offered as such.

The Jussieuan system he admits is, as it is said to be, more natural: but its multifarious subdivision distracts him; and he fears many beginners will be

deterred from a study of it, not only because the signs which separate orders and the marks which separate genera are really so minute, and in many cases so unappreciable, but that the terminology, titles, &c., are really so outlandish, that the system is absolutely repulsive. Like many others, he has hopes that somewhat will be done to simplify the science, so as to make the attainment of it as easy as the study of it is inviting *.

Respecting the nomenclature of fruits, the author complains of the multiplicity of names given to the very same kind, especially of apples and pears. To reduce the lists, or rather to prevent further accumulation of new names, he advises the council of the Horticultural Society to admit not another single sort into the collection, unless it can be clearly made appear that it is *superior* to every one already in possession. In the disposal of medals from that Society, he thinks they should be given for the greatest *entire crop successively produced*, rather than for a single excessively large flower or fruit, which may be merely the effect of accident, and for which the producer can claim but little merit. This way of distributing rewards, however, presupposes that the Society should have emissaries in all parts of the kingdom, which he admits is impossible. Still he thinks there should be some criterion of *general*

* Whilst these sheets are going through the press, the author learns Dr. Lindley has just published a work, under the title of "Ladies' Botany," which completely remedies the difficulty complained of.

good management fixed on to gain the medals, rather than bestowing them as is above alluded to. He (the author) instances the enormous bunch of the Syrian grape produced in a hothouse at Welbec in the senior Speechly's time. Had such a bunch been exhibited at the Society's rooms, it probably would have gained the first prize, and which the author considers would have been wrong; because the highly respectable Speechly did not deserve even a bronze medal for this single bunch, but *ten gold medals* for his uniform success in the production of every fruit which he cultivated: adding, that, if medals were distributed as rewards for general and uniform good management in business, the gift would not only be a passport for the owner through the world, but a satisfactory recommendation of him to every one needing his services.

The author cannot, however, withhold his willing tribute of praise from a Society which has already done so much good. And though its Transactions are more splendid than needful, and come forth at too distant periods to be really useful, still the exertions made to correct the nomenclature of our best fruits, and identifying those sorts worthy cultivation, together with the distribution of grafts, &c. (of which the author has largely participated) has been and continues to be of signal service to the country in general. Another proof of the influence and character of the Society may be inferred, from the great number of first-rate places being now filled by men who received the rudiments of the profession in the Society's garden.

Prompted by the same feelings which actuated the Society, relative to the collection and cultivation of fruits for the sake of comparison, in order to ascertain which were really the best, the author has been for many years employed; and although he has not had the boundless resources and means of trial as have been at the command of the Society, yet the results of his own experience (comprising a much longer period than that of the Society) have been such as induce him, without vanity, to think that the publication of his experimental and practical knowledge respecting fruits may be at least a useful auxiliary to the publications, direct or indirect, which have issued from the Society. In this light only he wishes what he has written may be considered; and he shall feel very great satisfaction indeed, if his practical knowledge thus elicited may be any way instrumental in advancing the culture of those fruits, which are destined for the regalement of the rich, and so easily obtainable for the comfort and refreshment of the poor.

Respecting the size of apples, the author thinks three distinctions are all that is necessary; *viz.* small, example the golden pippin; middling, example the nonsuch; and large, such as the Dutch codlin. The shape is not so material, and is certainly superfluous, if the fruit be rightly named, especially if described in geometrical and botanical terms. The following catalogue will comprise nearly one hundred and fifty of the most esteemed sorts, all familiarly described, with practical observations on their culture, value, history, &c.; specifying the purposes

for which they are best adapted, and other particulars necessary to be known by every cultivator of this useful fruit. At the end of the list will be given an improved method of keeping apples to a lengthened period.

DESCRIPTIVE CATALOGUE OF APPLES.

1. *Hawthornden*.—Reader, be not surprised at seeing this placed first on the list. Europe has not produced a better or more useful apple for all culinary purposes. It deserves precedence on many accounts: as an early and prolific bearer, as a free-growing and healthy tree, it has scarcely an equal. The fruit are fit for use from the time they are of the size of walnuts till they are ripe in October. When full grown, especially if the crop has been thinned, the fruit attain a large size—say from eight to ten inches in circumference—and continue good in the south of England till the end of December. In colder countries, or in cold seasons, they keep much longer. In Scotland, the fruit sometimes keep till the month of May. If the Ribstone pippin be esteemed the glory of Yorkshire, the Hawthornden certainly deserves to be called the glory of Scotland.

The fruit is generally above the middle size, round, a little flattened, with a few irregular risings. The pulp is light-green, solid, and abounding with a fine acid juice. The shoots are strong, and of a lightish-

brown hue, having the buds prominent; leaves large, and a little hoary. The tree, if worked on a paradise stock, begins to bear in the third year from the graft, and is rarely barren afterwards. Although of vigorous growth, the tree seldom attains a large size; the branches mostly inclining downwards, in consequence of the heavy crops.

Another advantage belonging to this variety of apple, is its thriving in almost any soil that has not a decidedly wet bottom; and may be planted as standards or as dwarfs, either trained on espaliers or in any other manner. If intended for grazed orchards the stems should be higher than usual, in order that the hanging branches may be out of the reach of cattle.

Any stock may be used for this apple; but for small gardens, the paradise stock should always be preferred.

The Hawthornden was early introduced into the Fulham nursery, whence many of the market-gardeners round London were supplied. About the same time it was introduced into Cambridge-shire by the late Lady Hardwicke, and extensively planted in that county, as well as all over the three kingdoms.

It is also to be remarked of this tree, that it is less liable to be infested by the mealy aphid, or American blight, than most other apple trees; owing, no doubt, to its more robust habit of growth.

2. *Juneating*.—This is an old inhabitant of our gardens, ripening in the end of July and beginning

of August. It is not so plentiful now as it was sixty years back; though, as being the earliest dessert apple, it deserves cultivation. The fruit is small, of a light-green colour, somewhat elongated, and borne on a long slender stalk. The shoots are slender, though upright. The fruit require to be gathered a day or two before they are ripe, as this improves their quality for the table.

As this apple is rather a shy bearer, several of them on paradise stocks should be trained as dwarfs, and one or two on crab stocks as espaliers. These last will ripen later, and keep good longer. It is said that Mr. Kirke, nurseryman, of Brompton near London, has a red variety of this apple, much superior in quality to the white one. The Juneating is an eligible sort for growing in pots; and the best manner of treating the trees is as follows:—Provide neat little maiden plants on paradise stocks, and pots for each twelve inches wide at top and ten in depth. Prepare some good compost, like that used for melons; that is, fresh hazel-loam with plenty of decomposed old hot-bed or other dung. Drain the pots well; and, when potted, plunge them in the ground in a sheltered situation, covering the surface over the pots with an inch or two of exhausted mulchy dung, to keep the roots safe from the changes of the weather. Here they may remain twelve months. In the second spring (supposing them to be potted in the early part of the first year), when the buds begin to swell, they should be pruned, reducing weak shoots to half their length, and strong shoots one-

third. After they begin to grow, the trees will require due supplies of water; and as the roots are in a sort of prison, the water given them should be rich. To make this manured water, mix it with one-third of its quantity of the brown drainage from dunghills, or what may be found in farmyards; or, if such cannot be had, collect a bushel or two of horse-droppings, which put in a large tub, together with a handful or two of soot, fill up with water, and stir it frequently. In the course of a few hours it may be given to the pots once or twice in the week. It should not be allowed to become stale; the fresher it is the better. This liquid the author has found more nutritive to potted trees than any thing else, and therefore can safely recommend it for every kind of fruit grown in pots.

About Michaelmas following, the mulch should be removed; the pots taken up, and replunged; taking care not to injure the surface roots, for these are of the greatest service to the plants. In the following spring little pruning will be necessary, only shortening some of the strongest shoots. In the course of the summer, flower-buds will be formed; and when this takes place, the trees are, at the proper season, fit to be taken into the cherry-house, or some such similar place, where they can have abundance of moisture and *moderate heat* (say from 56 to 65 deg. of Fahrenheit); for neither apples, plums, nor cherries, can bear violent forcing or dry heat.

If such potted trees have been housed and borne fruit, it is well to remove them to the open air as

soon after as possible; not put away, as is too often the case with such things, in any bye corner, but properly plunged, mulched, and regularly watered, to recover their vigour, and ripen their buds for the next year. It is hardly necessary to add, that, where a succession of forced apples are required, a sufficient stock of potted plants must be kept for the purpose; as a few such fruit plucked from the trees a month or two before they ripen naturally, are always regarded as a delicacy.

The Juneating, within the author's memory (above seventy years), used to be cried in the streets of London as "fine gennettings," showing how much more plentiful the fruit were then than now; and, though plentiful, was omitted in the abridgement of Millar's Dictionary, published in the year 1771, the year in which that "prince of gardeners" died.

3. *Margaret*. — Is a favourite apple, ripening about the end of August. The fruit is small, and rather oblong; the colour a light red, with streaks of a deeper colour next the sun. The flesh is melting; and, in favourable seasons, the juice is sweet and pleasant. It is a better bearer than the Juneating, which has caused it to be more generally cultivated. The fruit should be gathered before they are quite ripe in order to have them in perfection, as they soon get juiceless and mealy. Two trees are enough in any private collection, trained and managed like the Juneating, either in the orchard, as espaliers, or as dwarfs, on the borders of the garden. It is also suitable for potting.

4. *Calville d'Été*.—The summer Calville ripens in the beginning of August. The fruit is of the middle size, rather oval, and irregularly shaped. The colour is light-yellow, tinged with faint-red next the sun. The flesh is crisp, and the juice tart but pleasant. It is a most prolific and early bearer, often yielding fruit in the third year from the graft. The wood is slender, and consequently better adapted for dwarfs or espaliers than for standards. But its merit of earliness and fertility gains for it a place in every fruit-garden.

The above apple, with several other sorts which will be noticed hereafter, were imported from France per order of Sir P. Stephens, of Fulham, where they were planted, and leave given to the author to inspect them from time to time, and report as to their merits. Some few of them had been in this country before, many of them totally worthless; but such as were really good were added to the collection in the Fulham Nursery, and will be noticed in the sequel. All the sorts denominated Calville have a ribbed exterior, by which they are easily recognized.

5. *Summer Marygold*.—Ripens in the end of August. It is a handsome fruit, and a great favourite in the west of England, particularly in South Devon. Rather larger than the golden pippin, it is of a fine light red, with deeper streaks of the same colour of the sun side. The flesh is breaking, and the juice pleasant and abundant. It is a prolific bearer, and

makes a fine orchard standard of the third class, but will bear well in any way.

6. *Early Julien*.—Also ripens in the end of August. This has been recently introduced from Scotland, and proves to be a superior dessert fruit. The apple is larger than the preceding: colour bright yellow, seldom tinged with red, unless very much exposed to the sun, and then but slightly. The flesh is melting, and the juice plentiful and rich. It makes a handsome orchard tree of the third class, and is also suitable for espalier or bush training. Although it cannot be called a great, it is certainly a good bearer, and upon the whole a valuable summer apple.

7. *Passe Pomme Rouge*.—Ripens early in August. This is one of the French apples introduced by Sir P. Stephens before alluded to, and particularly marked by the author as well worth cultivation. It deserves a place in every collection, even for its beauty; but it has other qualities to recommend it: the flesh is crisp, juicy, and of very pleasant flavour. The fruit is rather larger than the Margaret, of a fine light red, nearly all over: handsomely formed and nearly oval. It forms a handsome tree, but is rather delicate; and is better adapted for dwarfs and espaliers than for the exposed orchard. The wood and leaves resemble those of the summer marygold, both having downy leaves, with very prominent buds. The adjective *passe*, much used by our French neighbours, signifies superior, or surpassing in value that before

the name of which it stands. In the present case it signifies that this one is superior to the old red apple of French orchardists. It may also here be added, that *pomme* is the French name of an apple : so that they have *pomme d'arbre*, tree apple, and *pomme de terre*, which is the earth-apple, or potato. The French fruiterers call and describe apples under two general denominations, namely, *pomme* and *rennette*; thus they have *pomme d'or*, golden pippin; and *rennette grise*, grey rennette.

8. *White Quarendon*.—Ripens about the end of August. This, though not equal in value to the red Quarendon, may be considered a very useful fruit, especially for the market gardener. It is rather larger than the red, and may occasionally be used in the dessert, as the flesh is crisp and juicy. For kitchen use it is exceeded by no early apple; and is equally a good bearer as its namesake. It makes a healthy standard of the second class in the orchard, and bears well in any shape or place.

9. *Oslin*.—Is an old favourite Scotch apple, ripening about the end of August. The fruit is somewhat in shape and size of a small red Quarendon: the colour is light green, much spotted, and turns yellow in ripening. The flesh is melting, and full of rich pleasant juice. It is ranked among the best dessert fruits of its season, and is now very generally cultivated. The tree, though healthy, is not of vigorous growth, and therefore well calculated for training on low espaliers, or as dwarfed standards.

10. *Red Astracan*.—This apple ripens about the

middle of August, and is as much celebrated for its beauty as its worth. The fruit are of the middle size, irregularly shaped, and of a beautiful red colour next the sun: the flesh is white, rather crisp, not very juicy, but of good flavour. Its vivid colour gives great richness to the dessert for a few days, but it soon becomes mealy. The tree makes healthy though not strong shoots, but is fertile, and does well as a dwarf, or in pots. If planted in the orchard, it ranks as a third class tree. The fruit bears a peculiar kind of bloom on its surface, which will be more fully described hereafter.

11. *Early New York*.—This apple, which ripens about the end of August, was received among a large collection of first-rate sorts (from the Nursery of Messrs. Whitly and Co., at Fulham), by Mr. W. Rogers, who established a nursery some years ago at Southampton. The apple, under the culture it received at the latter place, showed it to be well worth cultivation. The fruit is more long than round, of a light green colour slightly tinged with red. The pulp is breaking, with much pleasant juice. As the fruit ripen gradually, they may be gathered as wanted for some time. The tree is a good bearer in any shape.

12. *White Crofton*.—This apple, which ripens about the end of August or beginning of September, was one of a large collection brought from Ireland by the late Sir Evan Nepean, and was worked with others in the Fulham Nursery. The fruit is rather under the middle size, the colour light green, flesh

melting, juice abundant but not very rich. It may be called a good second-rate fruit: is an excellent bearer, and well worth the attention of market gardeners. Its stiff upright growth renders it eligible for the grass orchard, where it would rank as a second-rate tree.

At the time Sir Evan gave the above, with other Irish cuttings, to the author, he remarked, that the canker in apple trees was seldom seen in Ireland, neither did it appear on plants sent from England. The same remark was made, not only by Grimwood, but by Burnett and Foley, the principal nurserymen then near Dublin. Whether Irish apple trees are still free from canker the author has no means of knowing; he, however, considers it a lucky circumstance for that kingdom: and were he asked the cause of canker being so prevalent in England, would reply, that it is occasioned by *too deep* planting on unfavourable soils.

13. *Red Quarendon*.—Ripens from the end of August to the end of September, and when well ripened is reckoned a first-rate dessert fruit. The apple is nearly of the middle size, of a regular round shape, a little flattened; the stalk is thick and short, by which it adheres closely to the branch; the eye is prominent, and the colour a deep red next the sun, the same colour being suffused nearly all over. The flesh is greenish white, breaking in the mouth, and fully charged with a rich vinous juice. The tree is one of the most prolific bearers, is healthy, having a

stiff upright growth, and fit for every purpose of the orchardist.

The red Quarendon is so excellent an apple, that a little part of its history deserves to be recorded. The first intimation of this fruit was given by a Devonshire gentleman to the author above forty years ago. The gentleman was well stricken in years, and declared that he knew the apple when a boy: so that it must have been long in existence before it became generally known. Lucecomb, or Ford of Exeter, were referred to as possessing the apple: the latter was applied to, who furnished an order for the Fulham Nursery. There its superiority was soon and fully proved. Hence it was sought for by everybody; and is now distributed far and wide. The fruit is really so good and beautiful, that it well deserves a place on a wall in the north of England and Scotland; and where it would ripen in such perfection as to be little inferior to some of the Clingstone peaches.

All the foregoing are ranked as summer apples; those that follow, may be called early and late autumn sorts.

14. *Nonsuch*.—Ripens in September and October. Although this old favourite apple is usually esteemed a summer fruit, it seldom ripens sooner than the end of September, though fine seasons make a fortnight's difference. None of our apples have been more prized than this, particularly for the purposes of the cook. It is even esteemed in the dessert; it is an

early and good bearer, and forms a handsome orchard tree of the second class; no other sort answers better either for dwarfs or espalier training. The fruit is rather above the middle size, handsomely shaped, eye small, stalk short: the major part of the skin is curiously marbled with red and yellow, sometimes striped with red next the sun, and of an olive green on the other side. The flesh is white, melting, and full of a pleasant juice, having a peculiar flavour. The wood and leaves are remarkable; the former being somewhat thorny, the latter covered with a whitish dust, which thickens in dry weather, inviting, the author thinks, the attack of the American blight, to which this apple is very subject. It is perhaps on this last account that the nonsuch is not so much cultivated as it used to be fifty years ago; but certainly, if the tree be planted on a suitable soil, and can be kept free from the mealy aphid, no other sort gives more satisfaction.

15. *Flower of Kent*.—This is a large apple, ripening in October. The shape is rather flat and irregular; of a fine red colour next the sun, and slightly streaked with red on the shaded side. The pulp has a yellowish cast, the flavour good, and containing abundance of juice; consequently, one of the best kitchen apples. The tree belongs to the first class of orchard apples; forming a fine healthy head, and generally a good bearer. It may do as an espalier, but is not at all suitable for dwarf training, by reason of its luxuriant habit of growth. This apple is extensively cultivated near Sandwich in Kent, where

it is supposed to have originated many years ago. Those writers are mistaken who assert that this apple will keep till April; this has never been confirmed in the author's experience.

16. *Kirke's Scarlet Admirable*. — Is in perfection from October to the end of December; is a fine large showy fruit, of a red colour, rather longer than round; the flesh is breaking, full of richish juice, and very suitable for kitchen purposes. In the orchard it grows to be a fine healthy tree of the first class. When required for garden culture, it should be worked on paradise stocks, which will check its natural luxuriance. Though not a first-rate bearer, it will always be a desirable sort for the fruiterer, seeing that its beauty will always make it readily saleable in market. The apple is named from the first possessor of it about London, a nurseryman to whom the country is much indebted for the pains and industry bestowed by him in the cultivation of the best sorts of hardy fruit trees; and who has shown as many perfect specimens of his own productions at the Horticultural Society's meetings as any other member of the Society.

17. *Fameuse Pomme de Neige*. — This apple is ripe in October and November; and is called the snow-apple from the whiteness of the flesh. It is of American origin, introduced by a gentleman at Brompton, within these thirty years. Mr. Kirke propagated and distributed many of the kind to different nurserymen and others round London. A few were sent to the Southampton Nursery, where

they fruited, and from which the following description is taken :—The fruit is of the middle size, and handsome shape; the colour light green, faintly tinged with red; both skin and pulp are whiter than those of any other apple, hence the name; the flesh is crisp, juice pleasant, but not abundant. It grows well at first, though a delicate tree; much fitter for garden culture and training, than for the orchard. The singularity of the fruit will gain for it a place in collections: but, like other American kinds in this country, it is more than probable that it will become liable to canker; as when planted in strong soil they soon become affected with that fatal disease. A dry, light soil, on a dry bottom, is the only fit situation for this tree.

18. *Passe Pomme d'Automne*.—The best autumn apple. This ripens and is in perfection from October to November. It was one of those introduced from France by Sir P. Stephens, and proves a good desert apple. It is a showy fruit of the middle size, a little ovalar; the colour is red or vermillion; the flesh is melting and tinged with red, the juice vinous and agreeable; for its size it is remarkably light: is a good bearer, but rather a delicate tree. The young shoots have very prominent buds, and the leaves are large and hoary. When worked on paradise stocks, it bears admirably if trained like a bush, or on espaliers; and if intended for standards, they should be worked on crab or free stocks.

19. *Autumn Red Calville*.—In perfection in November and December. This is an old inhabitant of

English orchards, and is one of the best of the Calvilles. The fruit is nearly red when ripe, with a deeper shade next the sun. The flesh is full of a pleasant juice, and may either serve for the dessert or kitchen use. It is a liberal bearer, and makes a good healthy standard of the second class.

20. *Biggs' Nonsuch*.—Continues from the end of October to December. This variety is regarded as somewhat superior to the old nonsuch, because of its longer-keeping property; in all other respects it is nearly similar. As soon as it is ripe it is in full perfection; and is rather a superior kitchen fruit. As an orchard tree of the second class it deserves a preference; and also answers well as an espalier. This sort was raised by a person whose name it bears; and it should be observed, that it is less liable to the attack of the American blight than its older namesake.

21. *Pomme Roi*.—This very good culinary apple is usable during October, November, and December, and is much esteemed in the county of Sussex, to which locality, it is probable, it may have been received from the opposite coast of France. The fruit is full middle sized, rather oval, but irregularly shaped; the colour a deep blush next the sun, and lighter on the shaded side. The flesh is crisp and white, with abundance of quick acid juice. It grows vigorously, and makes a handsome orchard tree of the first class. The shoots rise upright, of a dark brown hue, and speckled like the shoots of the Chaumontelle pear. In Sussex it proves a good

friend to the market gardener; why should it not be equally beneficial in other places?

22. *Court-pendu Rouge*.—A favourite apple in season during November and December. This is one of the best apples introduced from France. The fruit is middle sized, round, and handsome; the colour fine red, verging to an olive green on the shaded side. The flesh is breaking, the juice rich, and well-flavoured. It is a dessert fruit, and though not a general good bearer, makes a good second class tree in the orchard. On paradise stocks it will do for dwarfs or espaliers.

23. *Sovereign*.—Ripe in November and December. This apple was introduced about sixteen years ago by the proprietor of the Southampton Nursery, for which he has had much commendation. It is a large sized fruit, measuring from ten to twelve inches in circumference, nearly round, but with some irregular ridging. The colour is a fine red, suffused nearly all over, only deeper next the sun; the flesh is breaking; the juice rich, vinous, and abundant. From the strength and vigour of the wood, it makes one of the first rate orchard trees. If wanted for dwarfs or espaliers, it should be grafted on the paradise stock. The quality of the fruit would recommend it to the dessert, but its great vulgar size forbids; for the kitchen, however, it is matchless. Most of the fruit have a singular mark or patch on one side, of a russet colour, about the size of a *sovereign*—whence the name.

24. *Sack and Sugar*.—This apple is fit for use in

November, and has its name from the great quantity of sugary juice it contains. Cuttings of this variety of apple were received by the author from a good friend of his, who lived at Acton, near London, above thirty years ago. It was worked and fruited in the Fulham Nursery, and afforded the following description:—The fruit is rather less than the middle size; nearly round, and flattened at top, with a large eye not very prominent; flesh white, soft, and abounding in well-flavoured juice. It grows freely, and forms a good second class tree for the orchard. It is also productive as a garden dwarf.

25. *Cat's Head*.—This old English apple is in season in October and November; is one of the largest size, and famous as a kitchen fruit, both in Jersey and in this country. The shape is irregular, flattish at both ends, with several longitudinal ridges. The skin is smooth, thin, and of a light green colour. The flesh, at first, is crisp, but after a few weeks, it gets soft, but not mealy. The juice is abundant, and well-flavoured. The tree belongs to the first class in the orchard, and though a shy bearer at first, it afterwards becomes as fruitful as any other in favouring seasons. The tree should have a sheltered situation, as its large and heavy fruit are liable to be shaken down by the wind. The author regrets that the above, and such other silly names, should be given to fruit, the catalogues being positively disgraced by them; as calves'-heads, dog and pig-snouts, cuisse madame, teton de Venus, &c. &c.

26. *Belle-bonne*.—This good apple is in perfection

during October, and onwards to the middle of January. A very old tree of this variety belongs to a cottager at Little Chart, near Ashford, in Kent; which, by all accounts, has stood above a century, and is still healthy and prolific. The fruit is large and rather oblong; of a dark-green colour, with a few stripes of red next the sun; stalk short, set in a deep cavity. The pulp is firm, and full of rich juice, consequently an excellent kitchen fruit. It is a first-rate orchard tree, and a good bearer. On the paradise stock it does very well, for either dwarfs or espaliers; more especially if planted in its favourite soil, *viz.*, a light loam.

This apple, which is probably of French origin, has been long overlooked by orchardists, but is now in the trade, and well worth attention.

27. *Bursdorffe, or Queen Charlotte's Apple.* — In perfection from November to February. In shape and size it resembles the golden pippin; colour, light yellow, tinged with red. The flesh is firm, and greenish white; the juice is rich, with an agreeable musky flavour. In growth, the tree is rather diminutive, though healthy, and ranks in the third class of an orchard collection. Its early and productive habit prevents its rising to a great size, and therefore is well adapted for dwarf bush training. It is a dessert fruit, and was a great favourite with the illustrious lady, from whom it has its name. Quantities of this fruit were ordered from the continent, for the use of the royal table; which, with those produced in the royal gardens, were carefully kept in sand to prolong their season. The author was first informed of

this mode of preserving fruit (particularly pears) by General Caillaud, above fifty years ago, and has been ever since very successful in the practice of it, the manner of which will be adverted to hereafter.

The author cannot finish this notice of the Bursdorffe apple, without appending to it a few remarks relative to its first introduction into England. It has been said that this fruit (received from Germany) was first planted in the royal gardens, by the senior Mr. W. Aiton, soon after his appointment as botanic gardener at Kew ; but this is a mistake. The Bursdorffe was first planted by the senior Mr. Haverfield, who was, in the first place, appointed by Lord Bute to the gardens at Kew, then the residence of the Princess Dowager of Wales. On the completion of Kew gardens (the pleasure ground being designed by Sir William Chambers), the botanic department was separated from the other parts, and the whole was offered to Mr. Haverfield, who then superintended Richmond gardens as well as those of Kew. But he, Mr. H., wisely declined ; for though a good gardener, he was no botanist. Thus was an opening made for Mr. Philip Millar's favourite pupil, the worthy Mr. W. Aiton. The writer of these remarks was then a journeyman in Richmond gardens, under Mr. Haverfield, where there were few or no tropical plants ; and as a knowledge of plants was then beginning to be a necessary part of a gardener's education, himself and fellow-workmen in the Richmond garden, envied the young men who were placed in the botanic garden at Kew. This might have been a real misfortune to

the Richmond lads, had a churl been the governor of the botanic garden at Kew. But how different was the conduct of the revered Mr. Aiton! and with what grateful feelings, even at this distant period, does the writer acknowledge his obligations to that truly excellent man! Mr. Aiton not only opened the botanic ground to the Richmond young men at all convenient seasons, but invited, and even *entreated* them, to improve themselves in botany; assisting them with the names, as well as specimens, of all that could be spared. Mr. Aiton's kind advice, and bright example, certainly moulded the character of numbers of young men, who had the good fortune to be under his superintendence, or within the influence of his exemplary conduct.

28. *Alexander*. — This apple, which is in perfection from the end of October to the middle of December, is one of the largest size, exceeding any other grown in this country. It is of Russian origin, and first became known in England by a sample of the fruit being imported by the late Mr. Lee of Hammersmith, one of which weighed nineteen ounces. This is a beautiful apple, rather oval, broader at the stalk than at the eye; the colour finely marbled, red, and yellowish green. The pulp is breaking, tender, and full of rich vinous juice; and were it not for its size, no bad dessert fruit. This apple, in fine seasons, bears a bloom, which, if carefully gathered, will keep on for some time. The tree is a middling bearer, and makes a good healthy standard of the second class. It may also be used for dwarfs or espaliers, if worked on the crab-

stock. It is observable, that the tree is less subject to suffer from American blight, than some other kinds of slower growth. A light rich loam suits it best.

29. *Brabant, or Glory of Flanders.* — Perfect in the two last months of the year. This very handsome fruit was received in the Southampton Nursery from Messrs. Whitley and Co. of Fulham. It is a full, middle-sized apple, round, and regularly formed, much like the Woodstock pippin in colour; *i.e.* red-marbled next the sun, shady side dark-green, turning yellow when ripe. The flesh is crisp, juicy, and well-flavoured, though rather sharp; is a good kitchen fruit. In bearing and stature, it is much like the preceding, and makes a good orchard tree of the second class.

30. *Quince Apple.* — This is in use from October to January, and has for many years been a great favourite with the orchardists of Kent. In that county, it is better known by the name of Lemon-pippin; but it is better to retain the name by which it has been known in the trade for above a hundred years.

The fruit is of the middle size, egg-shaped, and of a fine lemon colour, and when ripe, having a remarkable hip, or rising, adhering closely to the stalk, which latter is short and thick. The flesh is very firm, abounding with a fine acid juice, of a peculiar flavour, resembling, in some degree, that of the quince; whence the name. The tree grows vigorously, and makes a fine orchard tree of the first

class. In strong moist soils it is apt to canker ; to prevent which, it should be invariably planted very shallow on a dry subsoil. This apple is highly prized by the cook and confectioner.

31. *Spice Apple*.—Is in perfection from November to the end of January. This is a different apple to the aromatic russet of the French nurserymen, and by them called *Fenouillete grise*. The fruit is small, handsomely shaped, and of a yellow-russet colour. The flesh is rather firm, juice abundant and highly flavoured, for which it is much esteemed. It is a sound, healthy tree, though of slender growth ; is a good bearer, and may take a third-rate place in the orchard. For either dwarfs or espaliers the spice apple is well adapted ; and delights in a dry light soil. As this and the French aromatic russet are sometimes confounded, or mistaken for each other, it is necessary to point out the difference : the first produces shoots thinly studded with buds, while those of the second are thickly set with them ; besides, when growing together, there is a manifest difference in the habit. The author has reason to believe, that there is some affinity between the spice apple and the famous Ribstone pippin, of which some notice will be taken when treating of the latter fruit. Lately-published and well-authorized catalogues are not in accordance respecting this apple ; but the above description may be depended on. In alluding to these catalogues, one of which is that of the fruits in the Horticultural Society's garden at

Chiswick, the author cannot help paying a well-merited compliment to Mr. Thompson, who has the management of the hardy-fruit department in that establishment. His steady character as a man, and his intelligence, perseverance, and experience as a fruit-grower, render him every way competent for such a station; and the best results may be expected from his exertions and abilities, in fixing the nomenclature, and recording the true characteristics of all our most valuable British fruits now in cultivation. A corrected new edition of the Society's Catalogue will be, after a few years' more experience, anxiously expected; and then will be regarded as a standard directory for every cultivator in the kingdom.

The following are early and late winter and spring apples.

32. *Margill*.—This very excellent dessert apple is in perfection from November to February. Its quality is little inferior to the nonpareil in favourable seasons, and is also sooner ripe. In size, the fruit is small, somewhat egg-shaped, and of a light-russet colour tinged with red on the sun side, changing to yellow when ripe. The pulp is melting, and full of fine rich juice. The tree is generally healthy, though of diminutive growth, resembling, in some degree, the nonpareil. It forms a good standard of the third class in the orchard. As espaliers on the crab, and as dwarfs on the paradise stock, none answer better. The origin of this favourite apple has not been clearly traced. The author has known it for seventy

years, it being then in repute as a dessert fruit. The first tree of it he saw was an espalier in the Sheen garden, planted by Sir William Temple.

33. *Transparent Apple*.—This curious apple is the *Pomme d'Astracan* of the French, and in this country is usable during the two last months of the year. It appears early in French catalogues, being in both those of Merlet and Duhamel. It was received among the collection of Sir P. Stephens before mentioned. In the list accompanying that order, it was marked as ripe in January and February; but the author has rarely found it keep longer than the end of December. The fruit is rather oval, middle-sized, and of a whitish-green colour, and covered with white bloom. The flesh is crisp and transparent, resembling the pulp of a peach; so much so, indeed, that the seeds may be seen through it. The juice is moderate in quantity, but agreeable in flavour. The tree grows healthily, and generally bears well, taking a third-class place in the orchard; but is better adapted for espalier training on a light rich soil. For useful purposes the fruit is only second-rate, being more curious than serviceable.

34. *Luccomb's Seedling*.—Is a very good kitchen apple, in perfection from November to February. The fruit is large and nearly round; the skin dull-green, with a red marbled cheek next the sun. The flesh is firm, juice acid, but not abundant. This fruit is in repute about Exeter; near which city it was first raised by a person whose name it bears. It is an orchard tree of the first class, growing vigo-

rously, and generally bearing profusely; and well calculated for the market gardener. In strong loam, near London, the tree is liable to canker; it therefore should be placed in lightish loam on a dry bottom. For espalier or dwarf training it should be worked on the paradise stock.

35. *Hoary Morn*.—In use from November to the end of January. The first notice the author had of the existence of this variety of apple, was seeing it about the village of Newton, midway between Barnstaple and Torrington in Devonshire. On inquiring about the derivation of the name, was told that it resisted *hoar frost* better than others, and therefore was called *hoary morn*. The fruit, however, has merit, as it has been called *dainty* in some catalogues. It is of a large size, nearly round, with a few faint angles: colour marbled-red nearly all over: the eye small, and the stalk short; the latter circumstance is the cause of its suffering less from gales of wind than other long-stalked dangling kinds of fruit. The pulp is firm and of a yellow cast, the juice rich and pretty plentiful when well ripened. It sometimes bears a fine bloom, like the Alexander before mentioned.

It may be necessary here to inform the young reader what is meant by *bloom* of the fruit, as it may be mistaken for the flowers of the tree. This bloom on the fruit, so visible on the unripe cucumber and on all the plums, is a kind of exudation proceeding through the skin, and remaining on the surface of the fruit itself. It is easily rubbed off; but, when

preserved, is a recommendation to the fruit. This provincial fruit was, in 1815, introduced to the London nurseries through Mr. Whitley, at Fulham; and as it was approved of there, there can be no doubt but that its value as a kitchen and an orchard fruit will introduce it into every collection. There is a beautiful and faithful representation of it in Ronalds' Pomology.

36. *Dredge's Fame*.—In perfection from the end of November to the end of February. The fruit of this variety is rather above the middle size, roundish, but not regularly so: the eye hollow, with a short thick stalk; the young shoots covered with a dark-brown bark, with rather large blunt leaves. The fruit is handsome, beautifully marbled with red and green, the latter tint turning yellow when ripe. The flesh is firm, crisp, and full of pleasant high-flavoured juice; so rich, indeed, that it has been compared to the flavour of the pine apple. The tree is generally healthy, producing moderately strong shoots thickly set with prominent buds; always a good sign that the tree will be an early bearer, as is exemplified in the Ribstone pippin and Hawthornden sorts. All the varieties raised by this ingenious cultivator (Mr. Dredge) have this characteristic mark; namely, bold prominent buds.

To the market-gardener this variety of apple cannot be too strongly recommended, because of its early and prolific bearing. The only drawback on its value, is its liability to be attacked by the American blight even more than others; this requiring

from the cultivator much attention to prevent, especially in the early stages of the life of the tree.

The author cannot refrain from paying a small tribute of respect to the memory of Mr. Dredge. He really deserved some mark of distinction for the additions he made to our stock of useful fruits. Whatever his method was, or means employed in raising seedling varieties of apple, is and are unfortunately not now generally known; but it is certain he preceded Mr. President Knight in this branch of horticulture, and certainly with considerable success. He being, however, an obscure individual, and unconnected with the fashionable societies of the day, received from them neither notice nor badges of distinction; and they lost, by neglect of him, one who would have proved himself one of their most efficient members.

37. *Masters' Seedling*.—Is a good Kentish apple, in use from November to February. The fruit is above the middle size, and of a regular round shape: colour dark-green, tinged with red on one side, but yellow when ripe. The pulp is very firm, and charged with a fine, agreeable, acid juice. The tree is of robust growth, hardy, and not liable to blight; and well deserves the character of being a first-rate bearer, of the first class in the orchard.

This apple was raised by Mr. Masters, of Canterbury, one of our most respectable, liberal, and scientific provincial nurserymen; whose selection of fruits, and general arrangement of his nursery and plants, does him the greatest honour.

38. *Kirke's Incomparable*.—In perfection from November to January. This has a high-sounding name; and, though a good fruit, does not altogether deserve such an epithet. The fruit is large, longer than round; colour a light-green, with a ruddy cheek next the sun: yellow, when ripe. It has a breaking pulp full of rich juice. It makes a fine healthy tree of the first class in the orchard, or as an espalier; but liable to the American blight, if not timously guarded against.

39. *Dredge's Beauty of Wilts*.—Is an excellent apple, and superior to its namesake of Kent. It is in perfection from December to February, and may be used either at table or in the kitchen. The fruit is above the middle size, and regularly round; the colour a fine crimson next the sun, the rest olive-green waning to yellow when ripe. The flesh is breaking and crisp, with plenty of rich juice. The tree may take the first or second place in the orchard; and is also suitable for garden culture as dwarfs, if worked on the paradise stock. This apple has been erroneously associated with the Harvey pippin; a variety known for a hundred years before the Beauty of Wilts was raised.

40. *Kirke's Lord Nelson*.—In use from November to the end of February. Every thing named after this great man ought to be superexcellent; and this fruit is really so, but only for the cook and confectioner. It is above the middle size, of a round and handsome shape; colour light-yellow, finely intermixed with red of different shades. The flesh is

firm, white, and full of well-flavoured juice ; passable as a dessert apple, but chiefly used in the kitchen. In the orchard it makes a capital standard of the first class ; and, after a few years, becomes a good bearer. If grafted on the paradise stock, it does well as a dwarf ; but the fruit do not keep so long as when grafted on the crab. It is also observable, that this variety is not so subject to the American blight as some other of those already described.

41. *Golden Knob*. — This apple is usable from December to the end of February. It is under the middle size, but possesses some good qualities. The fruit is round, having a dark-yellow russet hue next the sun. The flesh very firm, and with a fair portion of pleasant acid juice. The tree is healthy and vigorous, well adapted for the orchard of a market fruit-grower, being a great bearer ; as many as sixty bushels, exclusive of windfalls, being sometimes yielded by a middle-sized tree. Four trees of this sort, now growing at Woking in Surrey, produced, in the year 1831, above four hundred bushels ! As abundant crops are often borne in Kent, where the tree is common, and not upon the richest land, but on thin soils having a dry substratum of chalk or limestone ; a situation where many other kinds of apples are seen to prosper.

42. *Pomme Vermilion*. — This is a beautiful apple, ripe in December and January, and was received from France in the collection of Sir P. Stephens. The fruit is small and egg-shaped ; the colour a

flaming red nearly all over. The pulp is crisp, and of an agreeable aromatic flavour. It is an early prolific bearer on dwarf trees, but rather too delicate in growth for standards. The sort is desirable for its splendid appearance in the dessert, and should always be planted in a light sandy loam; for though it arrives at a greater size both of tree and fruit in deep rich loam, the fruit are greatly deteriorated. For dwarfs, it should be worked on the paradise stock.

43. *Dredge's Fair Maid of Wishford*.—In perfection from the end of December to March. The fruit is middle-sized, round, and handsomely shaped; the colour a lively green marbled with a little red and russety spots. The flesh is firm, juicy, and not a bad dessert apple, though it is principally used in the kitchen. The tree bears early, and is a fine healthy grower; ranging in the orchard as one of the second class, but is well worth planting anywhere.

There are three or four other varieties raised by Mr. Dredge, which have merit; but these not having been under the immediate care of the author, he declines describing them.

44. *Grey Leadington*.—In perfection from November to January. This is an apple of Scottish origin, and in that country keeps longer than with us in England; owing, no doubt, to the lower temperature of the climate there. The fruit has no outward beauty, its virtues lie within; there being no better fruit for the cook and confectioner after Christmas

than this. It is of the middle size, and irregularly shaped; the colour a grey russet faintly marked with red on the sunny side, changing to a greenish-yellow when quite mature. The flesh is firm, the juice rich, and in good quantity. The tree is hardy, not liable to attack from insects, and a good bearer, ranking in the second grade in the orchard. This tree, planted in rich loam in the neighbourhood of London, remained free from canker till the roots descended into the moist subsoil, when it soon after was seized with that destructive disease. This circumstance furnishes a lesson to planters in general, as it was to the author in early life.

45. *Royal George*. — A very good fruit of Irish extraction, continuing in season from November to February. This fruit was introduced into England by Sir Evan Nepean, and propagated by the author, who succeeded in obtaining fruit from them in the third year from the graft. The fruit is above the middle size, round, though somewhat flattened at each end; the stalk short, and the eye large and prominent. General colour light-yellow dashed with red. The flesh is firm, and full of rich juice of a peculiar flavour; and may be used in the dessert or in the kitchen. The tree resembles the Ribstone pippin in habit, but is of more vigorous growth. It is an orchard tree of the first class, and well worth cultivation: it requires a rich loamy soil on a dry bottom.

46. *Norfolk Paradise*. — This is a good keeping apple, its season of usefulness extending from De-

ember to April. This variety was raised in a village near Norwich, and is one of the first-rate kitchen apples of that county. The fruit is full middle-size, egg-shaped, bright-red next the sun, and dark-green on the other. The pulp is firm, and full of acidulous juice. It makes a fine healthy standard for the orchard, in which it may take a second-rate place. It is generally a good bearer, and resists the American blight better than most others. A good loam is its favourite soil.

47. *Hunt-House*.—This keeps equally well with the preceding. It was found at Whithy, in Yorkshire (a cold, bleak place), and where it is extensively planted, and is a hardy, useful apple. The fruit is of small size, oval-shape; in colour olive-green, dashed with red on the side next the sun. The pulp is firm, and charged with an agreeable acid juice. The growth is not robust, the young shoots being mostly pendulous and thickly set with bold swollen buds. It is a tree of the third class in the orchard, and will answer well in exposed situations trained as dwarfs or half-standards, it being equal in hardihood, and very fit to be planted along with the grey Leadington.

48. *Hall Door*.—This fruit is good from the end of November till March, and has been long esteemed in the counties of Kent and Surrey. The fruit is of the middle size, rather elongated and irregular in shape, having risings near the eye, which is hollow. The stalk is short and thick; and adheres closely to the branch. The colour is dull yellow, streaked

with red on the sunward side. The pulp is firm, white, moderately juicy, and of a good flavour. It makes a healthy tree, having upright shoots well adapted for an orchard, where it may stand in the first class. After being established, no tree of the orchard bears better.

49. *Norfolk Colman*.—This fruit is in perfection from November to April: it is one of the first as to strength of growth and hardiness, and consequently an excellent sort for an orchard. The fruit is above the middle size, nearly round, rather flattened at the ends; the colour a dark-red on the sun side, and a greenish-yellow on the other. The pulp is firm, and the juice vinous though not abundant.

This apple tree is, from its luxuriant growth when young, rather slow in coming into bearing; and therefore requires the assistance of art to throw it into a bearing state. The expedients to cause this result have been already adverted to; and by a proper and timely execution of the directions given, the cultivator may not be disappointed in having to nurse a barren tree. It should always be grafted on the paradise stock.

50. *Minchall Crab*.—This useful variety is in season from November to March, sometimes longer. It originated at a village in Cheshire, whence it has its name. The original tree was in existence in 1777; and the author had once a fine tree of the kind under his charge in the garden of G. Wilbraham, Esq., at Grange Hall, near Northwich. The fruit is above the middle size, round, somewhat flat, and

would much resemble the Deux Annés, but for a slight rising or two on one side, which renders it less regular. The colour is brownish-green, slightly tinged with red on the exposed side. The eye is rather prominent, like the common crab. The pulp is firm and juicy, and very suitable for the purposes of the cook and confectioner. It is a hardy tree, and resists insects and canker as well as any, if planted on a loamy soil on a dry bottom. The author has observed, that the marl found in Cheshire, when dug, exposed to the air, and reduced and incorporated with a sandy soil, is particularly favourable to the growth of apple and other fruit trees; and recommends its application to orchard-grounds, whenever it can be obtained.

51. *Norfolk Beau-fin.* — An apple which keeps from November to May. How it happens to have a French name is not known, unless it was originally introduced into Norfolk from France, which is likely enough. The fruit is above the middle size, nearly round, flattened near the stalk, which is short, and seated in a hollow cavity. The colour is deep-red next the sun, suffused nearly all round; on the shaded side it is green, which is but little changed in ripening. The pulp is substantial, with a fair share of acidulous juice, and fit for every purpose of the cook, and especially the London confectioners, to whom great quantities used formerly to be sent for the purpose of drying. This tree grows rapidly when young, and during this luxuriance seldom bears; and it is not till the growth moderates, that

it shows fruit. In the orchard it belongs to the second grade, and requires a good light loam. On heavy moist ground it is liable to canker, but is not much relished by the American blight.

52. *The Crewe Apple*. — Ripe in November, and keeps till April. It is an excellent dessert fruit, below the middle size; rather oval; of a dark-yellow russet colour, changing to a brighter yellow when fully ripe. The pulp is crisp, and full of a fine rich juice, second only to the golden pippin in respect to flavour. In the orchard it grows to a goodly size in the second class; bears well in any shape. It may be trained either as dwarfs or espaliers. It requires a dry situation; for, like the golden pippin, it cannot thrive in moist ground.

Grafts of this apple were received from a gentleman of the name of Forman, who lived near Southampton; and who it seems, or some one of his family, had had the kind for many years previous, because it is usually called Forman's Crewe apple. Be this as it may, it is certainly a great acquisition to the orchardist.

53. *Yorkshire Greening*. — Is fit for use in December, and keeps till May or June. This is one of the best keeping apples, and good for various culinary purposes. The fruit is large, round, and flat; the colour dark green, in some seasons tinged with red. The flesh is firm, and full of sharp acid juice. The tree is not a vigorous grower, but healthy; and belongs to the second class of orchard trees. The fruit adhere firmly to the tree, an advantage in blowing

weather. It is supposed to be the John apple of Miller, and which he describes as a good cider fruit.

54. *Golden Harvey*.—Ripe in December, and keeps till June. This is one of the excellent apples, of which mention is made in the Herefordshire Pomona; and highly extolled by the first orchardist in the kingdom, T. A. Knight, Esq., who has caused not only this, but many more superior kinds of fruit, to be brought into notice and general cultivation. This apple is small, round, and of a handsome shape; the colour a russet yellow, tinted on the sunward side with bright red. The pulp is yellow, breaking and crisp; abounding with a high-flavoured juice, which remains long unexhausted. The tree is of moderate growth and size, healthy, hardy, and a good bearer. It falls in among the second grade of orchard trees; and, if worked on the paradise stock, no one answers better for either dwarfs or low espaliers. This apple in fine seasons produces the strongest cider; hence it is called the “Brandy Apple”, where that liquor (cider) is manufactured. No collection or orchard should be without a few trees of this excellent fruit.

55. *Coe's Golden Drop*.—Becomes fit for use in February, and continues good till May. This is a dessert apple of the first quality. The fruit is small, a little oval, and of a fine yellow colour within as well as without. It has a fine rich pulp and juice, and pleasing to most palates. In growth, the tree is upright, and forms a handsome head; ranking in

the second class. For garden purposes it is well calculated, either with a view to the quality of the fruit, or for the quantities usually produced. This variety was some years ago raised by a nurseryman of the name of Coe, at Bury St. Edmund's, in Suffolk; and who seems to be particularly fortunate in raising new varieties of fruit, as he has also raised a new and valuable plum, which also bears his name.

56. *Brickley Seedling*.—This variety of apple has not arrived at a bearing state under the writer's own eye, but he has seen the fruit, and judges that it may rank as a second-rate table apple; and from the healthy appearance of his young trees, considers it may turn out a good orchard tree. He has, moreover, received a high character of both tree and fruit.

57. *Deux Ans*.—An apple of two seasons; for such in fact is its property as well in England as in France, where it was first raised. In this country the *deux ans* is better known by the name *French Crab*, particularly in Covent Garden market; where great quantities, brought over from Normandy, are sold every year, about Midsummer, for culinary purposes. The fruit is full the middle size, round, and well formed; eye small, nearly level with the crown; colour dark green, intermixed with dull-red russet next the sun. The pulp is very firm, and of a lightish-green cast, sparingly filled with acidulous sap of no unpleasant flavour. It makes a very healthy tree, with moderately strong shoots covered with

brown very smooth bark. It seems to bid defiance to the American blight, and forms a handsome tree in the orchard. When worked on the paradise stock, the fruit are not so long-keeping as when grafted on the common crab.

This apple has been long known in England, being noticed by Langley and Miller in the beginning of the last century. It has been sometimes confounded with another name; *viz.* the Easter pip-pin, which is making a distinction where there is no difference. Nothing can be more absurd than this error of multiplying names, which can answer no good purpose. Indeed the author considers it a species of *crime*, because it is a downright imposition on the public.

The following are apples, which may be classed under the general name *Codlins*, because of the similarity of their culinary qualities; *viz.* —

58. *English Codlin*.—May be used from June to September. The fruit is above the middle size, and irregularly shaped; the colour light-green tinged with red. The pulp is soft, white, pretty juicy, and of a peculiar flavour. It is a tree of the second class in the orchard, and an abundant bearer. The crab stock, and any soil except strong clay or loose gravel, is suitable. Even stout truncheons of the branches planted in moist ground, as the banks of mill-ponds or ditches, will strike root, and become large thriving trees.

The codlin was once indispensable in English cookery; but since “codlins and cream” have al-

most ceased to be a common dish, and since the introduction of the Hawthornden and Keswick codlin varieties, the old English codlin is almost superseded. Add to this, the liability of our old favourite to suffer from American blight—more perhaps than any other sort—has added to that neglect into which it has lately fallen. But really so useful an apple as the old English codlin should not be lost, merely because it is subject to the attack of an insect, especially as that pest may be banished, as shall hereafter be shown.

59. *Dutch Codlin*.—Is in perfection during August and September. It is a fine apple of the largest size; fruit irregularly globular, having several prominent angles; colour light-green, faintly tinged with red on the sunward side. The pulp is firm, charged with agreeable acid juice, but which is not very abundant; stalk short, by which it adheres firmly to the branch, a favourable circumstance in the case of so large a fruit. It makes a good orchard tree of the first class; but, from its robust habit, is ill calculated for dwarfed forms: nor is it so subject to the American blight as the preceding. While young, it is a shy bearer; but as it advances to its full size, it becomes more prolific. This apple is otherwise called “the Glory of the West.”

60. *Kentish Codlin, or Fill Basket*.—This apple, which is in its perfection in September, may well be called by the latter name, from its productiveness as well as its size. The fruit is of an irregular longish shape; colour a yellowish-green, with a little blush

next the sun. The pulp and juice good, but not of the first quality. It should range with the first class in the orchard, as it grows to be a fine lofty standard. As an eating apple, it is inferior to the English codlin; but is as profitable a tree as can be planted.

61. *Spring Grove Codlin*.—Comes into use in August, and continues till the end of October. This fruit was first brought into notice by the late Right honourable Sir Joseph Banks, at his seat, Spring Grove, near Hounslow. The fruit is as large, but not so finely coloured as the Dutch codlin, though very much resembling that fruit in its habits and properties; with this advantage, it is a better bearer.

62. *Keswick Codlin*.—Usable from August to October. This fine serviceable apple was first found near Keswick in Cumberland, whence it has been lately introduced into the southern counties of England. The fruit is large, irregularly shaped, longer than round; colour bright green, with a faint dash of red. The pulp is firm, and more juicy than other codlins. The tree is generally healthy, and makes a fine standard of the second class; shoots strong and upright when young, but becomes drooping by the weight of the fruit, when advanced in growth. When grafted on the paradise stock, it does well as an espalier, and succeeds as well as any other on but indifferent soil. Like the Hawthornden, the fruit may be used as soon as it is the size of a walnut; appearing sometimes in market so early as the first week in July, and then being of a very fair size. It is an excellent kind for the cottager and market gar-

dener, who depend on early fruit. The following memorandum respecting the Keswick codlin is much in its favour as a cider fruit. On the 6th of May, 1832, when apple trees were in bloom, a severe frost happened, which killed almost all the fruit of a large orchard, except those of the Keswick codlin, of which there were two hundred trees. The crop which these produced, yielded ten gallons per tree, which at one shilling and sixpence per gallon, was eagerly purchased at market; and in fact realized more money than the whole orchard was worth!

63. *Manks Codlin*.—Is in perfection from the end of August to November. This is the longest keeper of all the codlins. The fruit is full middle size, oval, and of a more regular shape than any other of its class. The colour is pale yellow, with a deeper shade next the sun. The pulp is firm, and the juice more plentiful, but of a more austere nature than any other of the codlins. Still it is a useful apple; the tree being hardy, a good bearer, and thrives well on shallow soils, and in open situations.

Of the Tribe of Apples called Nonpareil.

Nonpareil is the name of a favourite and well-known apple. It is a sort which has attracted more than ordinary regard ever since it was first in cultivation: consequently, many pomologists have experimented upon this kind of apple, either with a view to obtain better sub-varieties, or progeny equal in value to the original. The consequence of these experiments has been, that we have now in our lists not

less than six sub-varieties of this fine apple, besides the original old one ; and they being desirable sorts, the author has thought it expedient to describe them together, in order that their merits respectively may be more readily perceived, and comparisons easier made.

64. *Summer or Early Nonpareil*.—This variety is in season from the end of August to October. The fruit is about the middle size, rather flattened, the eye small, and somewhat prominent; stalk long and slender; colour dull green, intermixed with a little russet round the stalk, and dashed with a faint red on the sunward side. The flesh is crisp, the juice, though not very abundant, is rich and well-flavoured; therefore fit for the table. In growth, the tree resembles its old progenitor; the shoots not however so slender, and generally well set with prominent buds; it makes a handsome standard of the third class in the orchard, and beautiful little dwarfs or espaliers when worked either on the paradise, free, or crab stock. The tree requires a sheltered situation, and the soil which suits this, as well as all its congeners, is a light, rich loam, on a dry subsoil. In heavy wet soils, they soon become cankered, and fall to decay. This is also called Lacy's Nonpareil.

65. *Pitmaston or Williams' Nonpareil*.—Fit for use in the two last months of the year. This apple was raised by the highly respectable and scientific gentleman whose name it bears. Mr. Williams has

been a close and successful follower of his intimate friend, the President of the Horticultural Society; and few gentlemen of his rank possess more practical knowledge of, or take more delight in the improvement of gardening. The merits of this variety of apple have not been tested under the eye of the author, and therefore he cannot give so full an account of the tree as he wishes; but having seen and partaken of the fruit, and having read all that has been published concerning it, he may safely aver, that, from its relation to the old favourite, and from what he has seen of the fruit, and heard of the tree, it is a sort well worth cultivation.

66. *Golden Nonpareil*.—Keeps and in perfection from December to February. This is a very handsome apple. It is rather less than the old nonpareil, but has the shape and make of that fruit. The colour light brown, turning to deep yellow when ripe. The pulp is solid, moderately charged with rich sap of a peculiar, yet agreeable flavour. Like the other descendants of the old sort, the tree is rather diminutive, and takes the third rank in the orchard. In the garden it should be trained as a dwarf or espalier: and if worked on the paradise stock, is invariably fruitful.

67. *Martin Nonpareil*.—Continues in use from December to March. This is a second-rate dessert fruit, and has been fully proved in the Southampton Nursery. It is about the same size as the old nonpareil, but not so regularly shaped. The colour a

yellowish brown, shaded with russet, and faint red on the sunny side. The flesh is firm, somewhat yellow, and its juice is agreeable. The tree is hardy, and a vigorous grower, and fit either for garden training, or for orchard standards. As it is a good bearer, it is worth the attention of the market gardener.

68. *Scarlet Nonpareil*.—One of the most beautiful of its family, and fit for use from Christmas to March. The fruit is nearly round, of a fine deep red next the sun, and dark green, turning at last to yellow, on the other. The eye is larger and more hollow than its parent, and the whole fruit is also larger. The pulp is very firm, the juice rich and abundant; but inferior in flavour to the old sort, though it comes the nearest to that fruit of any of its varieties. The tree is hardy, and makes a good orchard tree of the second class. If grafted on the paradise stock, it bears early, and yields fair fruit; but they do not keep so long, nor is the flavour so high, as when grown on the crab stock.

To the market gardener who happens to have a light dry loamy soil, this sort of apple would doubtless pay well; the fruit being frequently sold in Covent Garden Market towards the end of February, at two guineas per bushel!

This is one of the best apples which have been raised from seed within the memory of man. The late respectable nurseryman of Kensington, Mr. Grimwood, senior (now Malcolm and Co.), had the good fortune to detect this apple in a garden at Esher in

Surrey. From the original tree Mr. Grimwood had his grafts, and sold many of the young trees at a good profit. The sort, however, soon got into the hands of the neighbouring nurserymen, who have distributed it into every quarter of the three kingdoms.

69. *Braddick's Nonpareil*. — In perfection from the end of November till February. A very excellent little dessert apple, raised by a worthy gentleman whose name it bears. The fruit is of quite the nonpareil shape, but the stalk is different; for, instead of being long and slender, it is very short. The colour is a mixture of green and russet, tinted with faint red next the sun. The pulp has a yellowish cast, crisp, and filled with a rich pleasant juice. The tree is not a rank grower, but may probably rank in the third class of the orchard. For garden planting, it may be treated like the other varieties of the family, and deserves a place in every collection, as it is certainly a good bearer.

70. *The Old, or Original Nonpareil*. — No orchard fruit has been more valued than the nonpareil. The musky excellence of its flavour, and its long-keeping property, makes it universally desirable, whether for personal use and gratification, or for sale. The tree is diminutive in stature, and of weakly growth, never reaching higher than the third class in the orchard. When it is required in the garden for dwarf training, it should be on the paradise stock; if for espaliers, work it on the crab. The best soil for it has been already repeatedly mentioned, and in which it conti-

nues to thrive for a great number of years. Many trees, now in good health and full bearing, are known to have been planted fourscore years ago.

That the nonpareil is of French origin, is highly probable ; it being mentioned in a catalogue written by Merlet, one hundred and fifty years since. Merlet was followed by Duhamel, who describes the fruit as being of a green and grey colour, &c., and much esteemed in England ; leaving no doubt but that the apple he describes is identical with our nonpareil of the present day.

Of late years, it has been observed, that the nonpareil has not kept so well as formerly ; this, there is little doubt, is caused by the tree being too frequently worked upon the paradise and free stocks, instead of the true crab. For there is no fact more fully ascertained by nurserymen than this, that the crab stock is more congenial to every variety of apple than any other ; having a less tendency to alter the natural properties of the graft, and assisting the latter to display itself in its proper form of head, as well as maintaining the true flavour and keeping qualities of the mature fruit. The paradise stock may be used to induce a more dwarfish habit, and earlier fruitfulness, and the free stock to produce a contrary result ; but the crab stock only can be trusted to for the development of genuine character.

There are large importations of an apple from France, somewhat similar in size and flavour to the nonpareil. They are called by the Norman orchardists the *Haute-bonne* ; and though inferior in keep-

ing qualities to the true nonpareil, are nevertheless a good serviceable table fruit. Duhamel, in noticing this fruit, says, it is good at Easter; but the imported fruit do not exactly answer this account, because they usually decay before this period. They have more colour than our nonpareil, and get more yellow in ripening; and, upon the whole, the sort is well worth introduction into English collections.

The next tribe of apples which require particular notice, are the Pearmain. Why they are called by this specific name is not very evident; but it appears that it is a cognomen of some kind of pre-eminence.

71. *Summer Pearmain*. — In perfection from the tree, and for a week after gathering, during September. The fruit is of small size, and oval; stalk short and thick. The general colour light-green, with a blush of red next the sun. The pulp is agreeably soft, and full of pleasant juice, and very acceptable in the dessert. The tree is a healthy grower, shooting upright, and forming a handsome standard of the first class in the orchard. Trained as a dwarf, it forms a compact head, and is a good bearer in any shape.

72. *Scarlet Pearmain*. — Is in perfection from the beginning of October till the end of November. The fruit is oval, and about the middle size, and beautifully coloured. The flesh is firm, the juice rich and abundant; ranking as a second-rate dessert apple. It is a handsome orchard tree of the second class, and suitable for any mode of training in the garden; like most other apples, it affects a dry light loam, free

from superfluous moisture. This fruit is also called Bell's Pearmain.

73. *Royal Pearmain*.—Is a fine variety, in perfection during the two last months of the year. The fruit is large; colour red, streaky next the sun; general hue, greenish-yellow. The flesh is firm, and of a pale yellowish cast, yielding a good share of pleasant juice. The tree forms a handsome standard in the orchard, belonging to the second grade as to size; and generally is very free both from canker and blight, especially if planted in a dry-bottomed, loamy soil. The royal pearmain is an excellent market apple, and therefore should have a place in market gardens.

74. *Chester Pearmain*. — This apple is much cultivated round the city whence it is named, and is in use during November and the three following months. The fruit is small, quite the pearmain shape (that is, larger at one end than the other), with a remarkably small eye; colour, a dull green, marbled with red on the sunward side; the whole becoming deep yellow when ripe. The pulp is full of a sweet juice, which makes it a favourite apple in the dessert. The tree grows healthily, and ranges with the second class in the orchard. On the paradise stock, it will make a handsome bush-trained dwarf, for borders in the garden.

75. *Adams' Pearmain*.—This is a very good apple, in perfection from November till the end of January. It is not so much known at present as it deserves to be, and certainly merits cultivation. The fruit is

large ; colour, a yellowish green, varied with russet next the sun. The pulp is crisp, well charged with a fine rich juice, of a peculiar flavour. For the desert, it is a passable fruit ; and for kitchen use, very superior. It promises to be a good and profitable orchard tree, and most suitable for the market gardener.

76. *Powel's Pearmain*. — Keeps from the time of gathering till the month of April. This excellent variety of apple, the author fears, is almost lost to the country, as it does not appear in modern catalogues, or goes by another name. He first became acquainted with it in the Fulham Nursery, in 1791, and then the tree was forty years old. Tradition says it was raised by Powel, gardener to George the Second, who wrote on the culture of fruit and vegetables, having been, in the early part of his life, a practical gardener. The fruit is above the middle size, of a dark russety-green, faintly striped with red. The pulp is particularly firm, and of whitish-green colour, abounding with an agreeably acid juice. The tree is one of the strongest growers of all the pear-mains, and consequently very fitting for the first class in an orchard, being, though not a great, a fair bearer. As many young plants of this apple were sent out from the Fulham Nursery to different parts of the kingdom, it is probable the sort may be still standing in old orchards, unnoticed and unknown to commercial cultivators.

77. *Barcelona Pearmain*. — In perfection from the end of November to February. This is a well-

known and highly esteemed apple in the county of Kent, where it is known by the name of the Polinia Pearmain. It is of foreign origin, probably from Spain, as its name would imply. The fruit is of the middle size, with a small eye, and thick stalk. The colour next the sun is a fine light red, on the other, a russet yellow ; flesh firm, with plenty of rich vinous juice, agreeably acidulous. The tree is of moderate growth, but very healthy ; and seems to resist the American blight. It is an abundant bearer however it may be trained, and ranks in the second class in the orchard. It is considered a good dessert fruit, and sometimes keeps till the beginning of April.

78. *Loan's Pearmain*. — Is an old inhabitant of English gardens, and is best for kitchen use from January to April. The fruit is above the middle size ; colour, dark green, with a faint blush of red on the exposed side. The flesh is firm, and full of sharp acid juice, which makes it acceptable in the kitchen. In the orchard, it is one of the first class, growing vigorously, and in most seasons a good bearer.

79. *Lamb Abbey Pearmain*. — This variety is in use at the same time, and keeps as long as the preceding, but being superior in quality, is served up in the dessert. Lamb Abbey is in Kent, and there this apple was raised from the seed of the Newtown pip-pin ; but whether from an imported fruit, or from one grown in this country, is not said. Come how it may, it is a valuable addition to our stock of apples.

The fruit is less tapering than other pearmain, but there is a family likeness in the eye and stalk. It is of the middle size ; mottled with red on the sun side and green on the other. The pulp is crisp, and breaks ; yielding much fine and particularly well-flavoured juice. They are often good in March. The tree is a free grower, and suitable for either orchard or garden.

80. *Herefordshire Pearmain*.— Is in perfection from December to March. The fruit is about the middle size, oval, tapering towards the stalk, the eye and stalk like the other pearmain ; colour a dingy green faintly streaked with red. The pulp is firm, and abounds with a pleasant juice, and may be used in the dessert instead of better. The tree is not a willing bearer when young, but becomes prolific in age. It may be made earlier fruitful by uniting it with the paradise stock.

This apple has been confounded with the Royal Pearmain, a very different fruit. Gray of Fulham, Grimwood of Kensington, and other judges, always cultivated and considered them as distinct varieties ; and the author, who has attended to the habits of both for these forty years, is perfectly convinced of their distinct characters.

81. *Winter Pearmain* — This well-known variety is fit for the table from December to April, and is one of our best keeping sorts. That it has been long a favourite, is evident from its having been recommended by both Langley and Millar a century back. The fruit is of the middle size, somewhat

oval, tapering to the stalk, at which it is a little flattened. The general colour is dark green, but spotted all over with russet blotches, which give the fruit a hardy appearance. The flesh is firm, juicy, and of high flavour. It keeps without shrivelling, and turns yellow when dead ripe. The tree is of slender growth but healthy, and in general a good bearer.

82. *Hubbard's Pearmain*. — Is a new apple, lately added to the stock of the Southampton Nursery. It has a high character for long keeping, and superior qualities as a dessert fruit; but as sufficient information has not been had of these qualifications of the tree, the author refrains from vouching for what he has only heard from report.

The following are generally denominated Pippins; probably derived from the name *pepin*, the term used by the French in designating the seeds or kernels of apples, pears, &c.; and whence the French title *Pepineriste*, a nurseryman, or propagator of young fruit trees.

Of this class of apples there are above one hundred and thirty named in modern lists — a number, which in the author's opinion have no existence; nor, if they really could be shown, would such a crowd of names serve any good purpose; on the contrary, such lists are the plague of nurserymen, impose on and distract the public, and only disgrace the writers who waste precious time and paper in giving names to non-entities! The abridgment of such lists would be a great boon to nurserymen, because their customers'

orders are often filled up from these fashionable lists, which compels the nurseryman either to extend his collection to a ruinous extent, lose his customer, or adopt the new name by misnaming some other tree in his collection, which though a perfectly harmless imposition, makes a perfect chaos of the nomenclature. In the following pages those pippins only are described which the author can vouch for being really worth cultivation ; it being quite foreign to his purpose in this publication, to take any thing at second-hand, which is so completely within reach of his own personal experience.

83. *Summer Golden Pippin*.—A superior dessert fruit, and fit for the table about the beginning of September. The fruit is small, oval, and of a deep yellow colour on the sun side. The skin is dotted all over with brown spots, common to most of the dessert pippins. The flesh is breaking, and abounds with a fine-flavoured juice. The tree is an early and free bearer, and forms a handsome third class variety in the orchard. It is well calculated for potting, dwarf training, or low espaliers in the garden, when worked on the paradise stock. A light loamy soil on a dry bottom suits it best.

84. *Autumn Golden Pippin*.—This apple is in season in September and October, and is not so much cultivated as it deserves to be. The fruit is below the middle size, the stalk short, the eye large and prominent. The colour a fine blush next the sun, the opposite deep yellow when ripe. The pulp is crisp, not very juicy ; but the flavour is rich and agree-

able. The growth is like that of the Downton pippin, the wood being strong and upright, forming a fine second class standard. The tree answers well for garden training, and being a good bearer is worthy the attention of the market gardener. This apple, although but little known, has been long in England, the author having seen large trees of it at Betherston near Ashford in Kent, fifty years ago; and purchased young plants of it from the senior Mr. Russell, of the Lewisham Nursery, about the same time. This apple is sometimes imported from France, showing that it is a native of that country.

85. *Orange Pippin (Bland's)*. — In perfection during October. The fruit is small, flattened at both ends; stalk short, eye large and deep; colour light orange, deepening as it ripens, and varied with russet specks. The pulp is crisp, very juicy, and fit for the dessert. The tree is of moderate growth, forming upright shoots similar to the Fearn's pippin. It is an early and good bearer, of the second class in the orchard, and also eligible for garden training. The person (Bland) who raised this apple was a market gardener at Hammersmith above eighty years ago, whence it got into cultivation in the Fulham Nursery, and has been known to the author ever since.

86. *Kerry Pippin*. — This Irish variety is in use during September and the following month. The fruit is middle-sized, oval, unequally shaped; colour a fine crimson next the sun, light yellow on the shaded side; the pulp is yellowish, melting, and full of pleasant juice, and consequently acceptable in the

dessert. It makes a handsome standard of the second class, and bears well as a dwarf on the paradise stock.

This favourite apple has been long known in the county whence it is named, as well as in other parts of Ireland. It was first recommended and given to the author by Mr. Foley of Dublin, and subsequently spoken highly of by the late Sir E. Nepean, and by Sir Philip Stephens at Fulham, who received trees from his son-in-law, the late Lord Ranelagh. From the fruit borne by these trees the above description was taken. It is however to the worthy Mr. Robertson of Kilkenny that this and other countries are indebted for the general distribution of this fine apple ; his sound practical knowledge, liberally dispensed to whoever needs or requires advice, is as honourable to himself as it has been serviceable to those who were fortunate enough to receive his instructions on every subject of rural economy.

87. *Wormsley Pippin*.—This is a good but not a first-rate variety ; in season from the middle of September to the end of October. It is one of those introduced by Mr. Knight ; and though relished by many as a table fruit, is chiefly useful in the kitchen. The apple is of the middle size, and round ; colour light green, and russet next the sun ; the stalk long, and seated in a hollow cavity, but liable to be blown down by autumnal gales. The pulp is firm, with a moderate share of pretty rich vinous juice. It is a dwarfish growing tree, but healthy, and ranks in the third grade in the orchard. If trained in the garden,

it requires more than ordinary care to keep it free from the American blight, which its dwarfish habit invites to attack it.

88. *True Lemon Pippin*. — Is ripe in October and continues through November. It receives its name from its bright yellow colour. The fruit is round and small, somewhat flattened at the ends : the skin smooth and shining ; the eye small and hollow ; the flesh crisp, and the juice agreeable. The branches of the tree are slenderly flexible though healthy. Is a standard of the third class in the orchard, and is easily trained as an espalier, in which, or in any other form, it bears well.

89. *Red and Yellow Ingestrie Pippins*. — Are in season from the middle of October to the end of November. These two apples were a twin production, raised from seeds of the same fruit, and it is said from the same cell of the orange pippin, impregnated with the pollen of the old golden pippin, by T. A. Knight Esq. This is a fine instance of the value and efficacy of cross impregnation ; and had the ingenious gentleman achieved no other triumph of his skill and patient industry, this one would have been enough to have handed down his name with honour to the latest posterity. The fruit of both are very much alike in shape, size, and qualities ; the only difference is in colour, as expressed in their names. The shape and size resembles their male progenitor ; the flesh is firm, of a yellowish cast, indicating high flavour of the juices with which both abound.

90. *Breedon's Pippin*. — A good apple, and fit for the dessert during the two last months of the year. The fruit is small, resembling the summer golden pippin, but rather more flattened at the ends. Colour, a light yellow tinged with red on the exposed side; pulp crisp, and charged with agreeable juice, and may be pronounced one of the best of its season. In growth the tree is similar to that of the old golden pippin, and may rank in the same class in the orchard, or for the like purposes in the garden. The tree affects a light rich soil: in damp soils it is liable to canker.

91. *Harvey's Pippin*. — This is an old excellent kitchen apple, in season from November to February. The fruit is above the middle size, longer than round: colour dark green, speckled with brown, and in season faintly ruddy on the sun side. The flesh is firm, white, and having a moderate share of acidulous juice. It makes a hardy, first class tree in the orchard; is not nice as to soil, and generally a good bearer.

This apple, as before noticed, has been confounded with Dredge's beauty: but the author is certain they are decidedly distinct. The Harvey's pippin was in existence in this country before Dredge's time; and as Dredge himself informed the author, above forty years ago, he raised his beauty and two others from the same sowing, both perfectly different from the Harvey's pippin.

92. *Isle of Wight Pippin*. — In use from October to February, and well entitled to appear in the dessert.

The fruit is under the middle size, nearly round, and of a marbled red and yellow colour, the latter tint prevailing when thoroughly ripe. The pulp is firm, full of a rich juice slightly aromatic. The tree is healthy, though diminutive; ranging in the third class, and very suitable for garden training. It is also stated to be an excellent cider apple.

93. *Franklin's Pippin*. — This is a favourite fruit, and is ripe in November. It is small and oval: the eye hollow, the stalk short and deeply inserted. The colour pale, and afterwards a deep yellow, thickly sprinkled with small brown spots. The pulp is yellowish, breaking, and full of a pleasant, well-flavoured juice.

This apple is of American origin, and was introduced into our orchards by Mr. Kirke of Brompton. It is a delicate growing tree, but healthy, and a good bearer. The fruit are enlarged by being worked on the paradise stock.

94. *Padley's Pippin*. — Is in perfection during the two last months of the year. The fruit are small, a little flattened, with a slender stalk, and a little prominent eye. The colour is a brown russetty yellow slightly tinged with red. The pulp melting; the juice, though not plentiful, is rich and good. The tree is a prolific bearer in any shape, and belongs to the third class in the orchard; and for dwarfs is equal to any of the pippins.

Mr. Ronalds of Brentford first propagated this apple for sale, it being strongly recommended by the person whose name it bears, at that time royal gar-

dener at Hampton Court. In thus alluding to the name of Mr. Padley, the author cannot deny himself the pleasure of digressing a little, in order to pay a small mark of respect to an early contemporary, whose advancement in the world was wholly owing to his excellent moral conduct, and abilities as a first-rate gardener. Mr. Padley was a native of Yorkshire, and received the rudiments of his professional education in the nursery of the Messrs. Telford, at York. He came to London, and was soon recommended to a place of respectability. This he left, and accepted the place of foreman in the kitchen garden at Kew, as successor to Staples, who became gardener to Earl Stamford, at Dunham Massey in Cheshire. On the death of the celebrated "capability Brown," Mr. G. Haverfield was removed from Kew to Hampton Court, and took Mr. Padley with him as his foreman. Here he was eminently serviceable to his professional, as well as to his royal master, George III. On the death of Haverfield, Padley's interest with his sovereign outweighed all the interests of other candidates, though urged by the most influential persons about court. "*No, no, no,*" said his Majesty, "*it is Padley's birthright.*" Such was the reward of merit: and the narrator hopes, that his late friend Padley's example, will be an inducement to every young gardener so to conduct himself as to deserve a similar reward.

95. *Christie's Pippin*.—In season during November and December. Fruit about the middle size, round and flat; stalk short, eye small and hollow;

colour dull yellow, marbled with red next the sun. The flesh is breaking, not very juicy, but of a rich flavour and fit for the dessert. The tree is hardy, and grows to a second class amplitude.

96. *Fearns Pippin*. — Is in use from the end of November to February. The fruit is middle sized, longish and flat at the ends, stalk short and thick; eye large and deep; colour, a fine deep red on the exposed side, and green on the other. The pulp is firm, juicy, and of such a pleasing flavour as to be sometimes used in the dessert. They are also a good apple for drying. The tree is very healthy, and almost bids defiance to the American insect. It has also another good property, *viz.* the strength and shortness of the stalk enables the fruit to remain fast on the branches, when many others are thrown to the ground by the winds. The original tree of this variety first seen by the author, belonged to a person of the name of Bagley at Fulham.

97. *Kirke's Golden Pippin*. — Ripe in December, and keeps for two months afterwards. The fruit are small and produced in clusters, resembling those of the golden pippin; the eye large and stalk short. The pulp is firm, yellowish, and abounding with rich juice, and is one of the best of its season for the dessert. It is said that Mr. Kirke raised this apple from a seed of the old golden pippin, to which it is nearly allied, and is a better bearer if planted in a fine dry, loamy soil.

98. *Hughes' Golden Pippin*. — Fit for use from

November to January. Raised by Mr. Hughes from seed of the old variety : which shows the aptitude of this favourite apple to reproduce likenesses of itself with more certainty than any other cultivated fruit tree. The fruit are of the smallest size, round, and a little flattened at both ends ; the stalk is short, the eye large, and produces its fruit in larger clusters than Kirke's ; their qualities in every other respect are nearly the same, as well in the size and shape of the fruit, as in the habit of the trees.

99. *King of the Pippins*. — Is in use from November to January. Why such a pompous title has been bestowed on this apple must be left to Mr. Kirke to explain. The fruit is full the middle size : colour a light yellow, with a broad patch of red on the sunward side. The pulp breaks in the mouth, is white and juicy, and by some admitted in the dessert. The tree grows vigorously, and makes a healthy tree in the orchard, ranging among the first class. Either as an espalier on the crab, or a dwarf on the paradise stock, it answers well.

100. *Hampshire Yellow Golden Pippin*. — Good during November, December, and January. The fruit is of the middle size, oval, and of a handsome shape : the colour light yellow, deeper towards the sun. The pulp is firm, and full of juice, and of pretty good quality. The tree is healthy, but not a strong grower ; it ranges in the second class in the orchard. This fruit has been by some considered the same as the preceding, or rather the king of the

pippins has been called the Hampshire—a palpable mistake. This is also called provincially Jones's Southampton Pippin.

101. *Aromatic Pippin*.—In season from November to February. The fruit is rather above the middle size, round and rather flat: the stalk is short, the eye small, and both seated in deep cavities. The colours are, a deep red on the exposed side, and greenish brown on the shaded side. The pulp is yellow and crisp, the juice plentiful, and of a fine aromatic flavour, whence its name. The tree makes one of the second class in the orchard, and is generally a good bearer. It is the same apple which is called *The Cornish Aromatic Pippin*.

102. *Downton Pippin*.—In perfection from November to January. This is the best apple that has yet been raised by Mr. Knight by means of artificial impregnation. It was produced by the union of the orange and golden pippins, and is certainly a great acquisition to our table fruits. The fruit is a little larger than the old golden pippin, somewhat flat at the ends: the stalk is short, and the eye hollow. The colour is a light yellow, deepening as it ripens. The skin is smooth, and pounced with specks. The pulp is firm, and charged with a fine-flavoured juice. It makes a good standard of the second class, and beautiful compact dwarfs on the borders of the garden. It is also desirable for cider, and the market gardener.

103. *Court of Wick Pippin*.—Ripens in the middle of November, and keeps till the beginning of March.

This has its name from a village of Somersetshire, where it was first found, it having been raised from a pip of the old golden pippin. The fruit is near the middle size, a little ovalar, and flat at the ends; eye and stalk not so deeply sunk as are those parts of the Downton pippin. The colour is yellow, with a slight tinge of red next the sun. The flesh is crisp, and filled with fine high-flavoured juice. It makes a healthy tree, not subject to blight, nor over-nice in respect of soil, and is altogether a very eligible orchard tree of the second class. For garden purposes it is equally suitable; and, if worked on the paradise stock, the fruit are larger, but they do not keep so long—an effect universally observed of fruit produced on this stock.

104. *Bringewood Pippin*. — Keeps good from December to the end of February. This is another dessert apple raised by Mr. Knight, produced from a seed of the golden Harvey, impregnated by the pollen of the old golden pippin. The fruit are small, nearly round; stalk short and slender; eye small, like that of the female parent. The colour is first a light, and afterwards a deep yellow. The pulp is crisp, not very juicy, but of an agreeable somewhat aromatic flavour. The tree is generally healthy, though of rather weakly growth, and hence liable to the attack of the American insect. It belongs to the third class of orchard trees. It is but a middling bearer; but even a few fruit is a desirable addition to the dessert.

105. *Ribstone Pippin*. — This apple is also called

“the Glory of York.” It is in perfection from the end of November to March, sometimes longer; but which depends on the manner of storing, and the state of the fruit when gathered. The fruit is full the middle size, irregularly shaped, having a rising or two on one side. The stalk is short, and fixed in a hollow cavity. The colour is a marbled dull-red next the sun; the shady side yellowish, with a thin russet hue, more or less extended round the stalk. The pulp is firm, yellowish, and abounding in juice of high aromatic flavour. It is much relished in the dessert, more especially about Christmas; indeed during the whole time it is in keeping. It is an excellent apple for the cook and confectioner; and for cider it has the highest character, yielding liquor of the first quality, if manufactured in about a fortnight or three weeks after the fruit are gathered.

The tree is hardy, and a general good bearer; healthy and vigorous if planted in a loamy soil, having a dry hard subsoil. Stiff moist soil causes canker and other defects; while on very inferior soils, and bleak situations, the tree bears bountifully. It forms a tree of the second class in the orchard, and is suitable for garden training in any way. In growth the habit is somewhat similar to that of the Hawthornden, Quarendon, and nonsuch; the young shoots and leaves being covered with a hoary powder, which, though it be an indication of early fruitfulness, seems to be attractive of the American insect in a greater degree than other shining-barked varieties: but this must be provided against by early

attention to extirpate the insect as soon as it appears, or rather to prevent its seating itself by timely application of a remedy or preventive hereafter to be mentioned. The Ribstone pippin takes well on any of the three stocks; but the fruit from the crab stock are always superior.

This favourite apple is brought to great perfection in the north of England, and in Scotland by being planted against walls. By such means the flavour is heightened, and the size so increased, that when one grown in the garden of Mulgrave Castle was shown to the late Mr. Grainge, of Covent Garden, he actually did not know the fruit—so much was it altered in dimension and appearance.

Much has been written relative to the discovery and early history of this famous apple, the substance of which is as follows:—Hargrave, in his History of Knaresborough, speaks of the place as remarkable for the production of a delicious apple called the Ribston Park pippin, the original tree of which was raised, in the year 1688, from the seed of a pippin brought from France. The author saw the original in August 1789; it then was bearing a fair crop of fruit, but the tree was evidently declining. About twenty years afterwards it was partly blown down by wind, which hastened its final decay; and probably, ere now, it has entirely disappeared, but not without leaving a numerous progeny behind.

A son of the gardener at Ribston Hall, of the name of Lowe, who raised the apple, reported, that his father sowed seeds of the *spice apple*, which pro-

duced three plants. These were planted in the park, and one of them proved to be the apple in question. Lowe, the son, was afterwards foreman under the famous Launcelot Brown, at Hampton Court; and subsequently a nurseryman at Hampton Wick, where he was much respected as a pomologist, and for his abilities in planting gardens, as executed at Earl Spencer's at Wimbledon, and many other places in the neighbourhood.

It may be remarked as unaccountable, that such an apple as the Ribstone pippin should have been so long overlooked by nurserymen, and by such writers as Miller, who appears to have been wholly unacquainted with it, otherwise he certainly would have named it in his lists.

From the circumstances alluded to by Hargrave, and reported by Lowe, junior, the author thinks it probable that the spice apple might have been carried from England to France, and from thence the fruit or seeds were received at Ribstone Hall, and there sown. This supposition reconciles the different reports of Hargrave and Lowe, and also accounts for the apparent affinity of the two apples.

106. *Blenheim, or Woodstock Pippin*.—Keeps good from November to March. This is a very handsome useful apple; large, flat at the stalk, which is short and thick. The eye is large and hollow; the colour yellowish-green, marbled with different shades of red on the exposed side. The pulp is firm, juice plentiful, and of a fine acid flavour. The tree is healthy, and grows vigorously, forming a standard of the first class. From its vigorous growth it is not fruit-

ful when young, but afterwards bears well. On the paradise stock it does well as a dwarf or espalier; and, when in fruit, is a fine ornament to a garden. It has been long in the Southampton and other nurseries.

107. *Kentish Pippin*.—An excellent culinary apple, in use from November to February. The fruit is large and longish, of an uneven surface; stalk long and slender; eye small and close; colour dull green, afterwards yellow; over the whole, brown spots are scattered. The pulp is firm, and abounding in a fine acid juice. In the orchard, the tree rises to be one of the first class, and is always profitable if on its favourite soil, *viz.* a moderate loamy soil on a dry bottom.

108. *Holland Pippin*.—Is in perfection from November to March. This is another good old apple, cultivated in Kent ever since the beginning of the last century. It is mentioned by both Langley and Miller, who were contemporaries, but, it seems, not friends: however, both speak well of the fruit. The apple is large and roundish, of a dark-greenish yellow intermixed with russet next the sun, with a faint dash of red; yellow when fully ripe. The flesh is firm and breaking, the juice acid but rich, and much esteemed for kitchen purposes. The tree is similar in growth and other characteristics to the preceding, and may be similarly treated in every respect.

There are two other apples commonly found in Kentish orchards, *viz.* the *Flanders Pippin*, and the *Broad Eye Pippin*, along with the Holland pippin.

They are all very like in manner of growth, qualities, and fruitfulness, and well adapted for cottage or market gardens.

109. *Wyken Pippin*.—Is a celebrated Worcestershire apple, ripe in November and keeps till February. The fruit is small, oval, and flattened at the ends; the colour a greenish yellow, dotted with brown. The pulp is yellowish, rather crisp: the juice not abundant, but very agreeable, consequently admissible in the dessert. This fruit was raised from seed in a village near Coventry, whence it is named; the original tree having been seen by the author above forty years since: it was then in a state of decay. From its prolific bearing, the kind has been extensively planted in the neighbourhood of Coventry, whence it is sent to the London markets, and often sold for the golden pippin! The close resemblance of the two fruits, as well in size, shape, and colour, favours this deception; and it would be well if no greater frauds were practised in these markets than this.

The tree is generally healthy, and makes a good standard of the second class in the orchard. And for dwarf and espalier training, no tree answers better.

110. *London Pippin*.—Comes into use in November, and continues good till March. A favourite apple in the London markets. The fruit is a full middle size; the colour dark green, mottled with red, but yellow when ripe. The pulp is firm and juicy; excellent for the kitchen, and not to be de-

spised even in the dessert. The shape is peculiar; having four or five ribs running from the stalk to the eye, which is nearly closed by them.

The tree is a healthy, though not a robust grower; in general a good bearer, making a good standard of the second class in the orchard, in every one of which it deserves a place.

In some lately published fruit catalogues, very different accounts are given as to the keeping properties of this apple: but what is above stated may be depended upon. Sometimes, indeed, a different stock, soil, situation, or season, will very much alter the keeping properties of fruit: but certainly not so much as is represented in the catalogues alluded to. There is another apple in the Canterbury Nursery collection, called *Lacy's New London Pippin*, which is highly spoken of: but of this the author knows nothing from his own experience.

111. *Fall Pippin*.—Is in season from November to February, sometimes till the middle of March. This is one of the largest apples in cultivation in this country. The shape is irregular, rather elongated, measuring from fourteen to sixteen inches in circumference (but light for the size), and flat at the ends. Colour light green, shaded with red; skin smooth and shining: the eye in a deep hollow. The stalk short and weak for so large a fruit. The pulp is crisp, and of a yellow tint; the juice sweet, but in no great quantity. The tree is of middling growth; making strong shoots, when young, like the Newtown pippin, but not so vigorous. It may range in the

second class in the orchard ; but is best adapted for espalier training, in order that the fruit may be safe from violent winds.

This apple has been supposed to have been introduced by Mr. Cobbett on his return from America ; and though it is certain he brought and distributed many plants and cuttings, it is equally certain that it was both in France and in this country long before. This variety, like most of the American apples introduced into this country, requires a rich loamy soil, on a dry bottom, to grow in, otherwise they are liable to canker. Very large apples are sometimes produced by accident in this country, owing to a single fruit receiving an extraordinary share of the vigour of the tree, or from some peculiar mode of treatment ; but this may never again happen on the same tree. An apple (the name is not given) was once produced at Wollaton Hall, in Nottinghamshire, that weighed nineteen and a half ounces ! Another was once grown in the neighbourhood of New York, in the United States, that weighed above thirty-five ounces !! But these instances are only sports of nature, being more curious than useful. The last-mentioned, however, is said to have kept sound nearly five weeks after ripening.

112. *Newtown Pippin*.—Is in season from December to April. This is one of the most famous of all the American apples. The fruit is full the middle size ; rather flat, irregularly shaped, though approaching to round ; the eye is open, but sunk in a cavity ; the stalk short and deeply inserted. The colour is

first dark green, and afterwards yellow, and partly covered with a faint russet, and blush on the sun side. The pulp is firm, of a yellow cast, and the juice rich, and of a fine vinous flavour. The above is the description of a fruit imported from America. In this country they rarely ripen in perfection; and then only on walls, and on very dry and rich loamy soils. The tree grows luxuriantly, making strong curved shoots, and rising to an orchard tree of the first class. For dwarfs, it requires to be grafted on the paradise stock. In any shape it is but a shy bearer; and as to its qualities as a dessert fruit, it has been much over-rated, as is acknowledged by the American nurserymen themselves, who declare that they have several varieties much superior to the Newtown. The original tree is, or lately was, still in existence near New York, and supposed to be nearly two hundred years old, and in the possession of the same family nearly all that time.

113. *Cockle Pippin*.—In season from January to April. It is also called the nutmeg pippin in the London markets. The fruit is oval, and of the middle size; colour light green, speckled with numerous grey spots, the whole turning to a brownish yellow when ripe; the eye is small and hollow, and the stalk long and slender. The flesh is firm; juice plentiful, acidulous, but pleasant. The tree is of rather diminutive growth, but hardy, and makes a good standard of the third class, and also a handsome dwarf or espalier, bearing well in any shape. The fruit sometimes keep till the middle of May,

which is its greatest excellence ; being particularly acceptable in the dessert at that season.

This apple is much cultivated in Sussex, chiefly for the London market, where it meets a ready sale.

114. *Farleigh Pippin*. — Usable from November to March. This is a favourite Kentish sort, raised in the village whence it is named. The fruit is middle sized, oval, somewhat angular ; the colour light green, turning to a golden hue when ripe. The pulp is very firm, the juice rich, and worthy a place in the dessert. It is also acceptable to the confectioner, and makes excellent cider. It is an upright growing tree, and in height ranges in the first class. It is also easily trained as an espalier, and being an excellent bearer cannot be too strongly recommended to the market gardener.

The Farleigh pippin has been used instead of the golden pippin for the manufacture of superior cider ; and has been said to yield liquor of equal quality, if the fruit were used before they were quite ripe.

115. *Robinson's Pippin*. — Fit for use in December, and keeps till May. This fruit is small, oval, and flat at the ends. The colour dark green russet, afterwards yellow. The pulp is free and juicy ; more or less acid according to the season. The tree is of small growth, and belongs to the third class in the orchard, but better adapted for dwarf training in the garden. It is but a shy bearer.

This variety originated in the Turnham Green Nursery, either in the time of Scott (of whom Justice of Edinburgh makes honourable mention), or in that

of Robinson, who succeeded him in the nursery. The latter, however, propagated and sent it forth to the world under his own name, and by which it is now pretty generally known, although it is not mentioned in the early catalogue of Grimwood, nor by Miller of Bristol, nor by Masters of Canterbury; but is beautifully figured in Ronalds of Brentford's splendid work, whose father probably knew both Scott and Robinson, as well as the history of the apple.

116. *Old English Golden Pippin*. — This is one of our oldest and most esteemed orchard fruits. It may be called with much propriety, *The Glory of England*. The fruit is small, but varying a little in size, according to the age or health of the tree. It is somewhat longer than round; the eye small, and rather prominent; the stalk long and slender; colour clear yellow, changing to deep gold when perfectly mature. The whole fruit is sprinkled over with minute and various sized white or russet dots. The pulp is firm, yellowish, and crisp; abounding with rich, sweet juice, of an agreeable flavour peculiar to itself. The tree, though not diminutive, is of a delicate habit, and rather fastidious as to the soil it is planted in.

The golden pippin being one of our most useful and esteemed hardy fruits, the author trusts he will be forgiven for entering more at large into its history and management, than he has thought necessary in the preceding notices of other inferior kinds of apples, especially as there has been for several years past an idea prevalent, that this country was about to lose this fine fruit for ever. In Mr. Knight's

Treatise on Orchard Fruit the doctrine was first broached, that all our varieties and subvarieties of fruits have but a temporary existence. They are raised from seed, flourish for an uncertain number of years, and, after arriving at their maximum of health and fertility, gradually sink to decay, and at length disappear. Taking this idea as a rule, the golden pippin was judged to be in this last stage of existence; and it was predicted, that not only were the old full-grown trees to disappear, but all the young ones, lately worked from them, would perish also. It must be admitted, that a great majority of the old golden pippin trees in Herefordshire and in other parts of the kingdom were, about the time Mr. Knight wrote his treatise, in an apparent state of decay; and moreover, that young trees of the same sort could but with difficulty be made to grow and bear so freely as they had previously done. These failures, however, were accounted for in another way than that propounded by Mr. Knight. It was observed, that the old trees having probably all been planted about the same time, and having arrived at their natural period of healthy existence, were, *like all other trees*, falling to decay from sheer old age; and that the contemporaneous weakness and debility of the young lately planted trees, were caused by a careless choice of grafts—by working them on improper stocks—and planting them in old worn-out soil, instead of in fresh well-trenched, light, loamy situations. This latter opinion was the more feasible, because there were many middle-aged trees in differ-

ent parts of the kingdom, which were in full vigour and bearing; and though young plants *pitted* in old gardens and orchards were unthrifty, such as were properly planted in newly broken-up ground, provided they were worked on the best crab stock, succeeded as well as ever.

This being the opinion of the author respecting the failure of the old golden pippin, and other old sorts of apples, he gave the subject his best consideration, and set about proving how far his own conjectures were well or ill founded; and, after the experience of forty years, he has come to the following conclusion, *viz.* — that if crab stocks be raised from the most healthy wild trees, properly treated and planted out in the nursery, *and worked with the most healthy moderate-sized scions, cut from the top of sound healthy trees*, and when fit for final transplantation be placed on well-trenched light fresh loam, having a dry bottom of rock or chalk, the trees will assuredly prosper without fear of disappointment. On the other hand, if the grafts be taken indiscriminately from any tree, or from any part of a tree, and placed either on free or paradise stocks, the young trees so raised will, nine times out of twelve, be in some respect or other defective; and particularly if they be not afterwards planted in their favourite soil, where their wood would not be sufficiently ripened.

The golden pippin requires a dry and moderately warm climate. The best fruit are produced in Normandy on the Continent, in Sussex in England,

and on walls in Scotland. The south of France is too warm, and the richer counties of England and Ireland are too moist. This apple is supposed to have been first raised at Parham Park, on the South Downs of Sussex.

It has been noticed of late years, that neither the golden pippin nor nonpareil keep so well as formerly. The author well remembers, that, sixty years ago, both these kinds of apples were plentiful in May; but it is not so at present. This is attributable to two causes—our summers lately being more moist, and perhaps too many *free* and *paradise* stocks used in the nurseries. It has been deemed a good practice to raise the golden pippin from cuttings or layers. This plan is quite practicable; and some practitioners have been very successful in raising plants from cuttings intended for potting. Trees may also be raised by layers from stools kept on purpose in the nursery.

The following are a tribe of apples usually denominated *Renette* or *Reinette* by the French, and are such as the author has found most worthy of cultivation.

117. *Golden Reinette*. — Is fit for the table from the first of November to the end of January. This is an exquisite fruit, and vies in excellence even with the golden pippin itself. The fruit is about the middle size, somewhat elongated; the eye large, but not deep; the stalk long, but with a firm hold of the branch. The colour a light-yellow, marbled with red; deep gold when ripe. The pulp is breaking,

and, when perfectly ripe, full of uncommonly rich juice.

The tree forms a handsome standard of the second class; shoots strong and upright; usually covered with thickly-clustered flowers, which resist spring frosts better than many others. It is equally eligible for garden culture on the paradise stock, either for dwarfs or espaliers. If planted too deep, or if the roots penetrate into a moist subsoil, the canker appears; but if grown on dry pasture-land, as they are in Kent, the tree remains healthy, and bears well. This apple always commands a high price at market, and therefore should always have a place in the collection of the market gardener.

118. *Kirke's Golden Reinette*.—Is in season from November to January. This variety was introduced by the nurseryman whose name it bears. How it was obtained is not made public; but it is certainly different from the old one, both in habit and size of fruit. It requires the same treatment, and is suitable for the same purposes as the preceding.

119. *Autumn Reinette*.—Fit for use from October to February. The fruit is of the middle size, rather oval, and of a mottled-red next the sun; the shaded side yellow, when ripe. The pulp is crisp, and contains a fair quantity of rich juice. The tree is healthy, and a good bearer either on the crab or paradise stock. It ranges in the second class, and is very suitable for dwarf training.

120. *Monstrous Reinette*.—Keeps from the end of November till March. This variety is of French

origin, though Duhamel calls it *Grosse Reinette d'Angleterre*. The fruit is large, round, and flat; irregular in shape towards the eye; stalk short and thick, closely attached to the branches; colour a deep green, tinged with russet on the exposed side. The pulp is crisp, of a yellowish cast, abounding in a pleasant acid juice; and much more valued in the kitchen than in the dessert, though highly extolled for the latter purpose by some writers. It is a standard of the third class, and very proper for espalier training.

121. *Selwood's Reinette*. — Comes into use in January, and continues till April. This apple was received above fifty years ago by the author (then gardener to Sir E. Dering) from Messrs. Hewit and Co. of Brompton. The fruit is of the middle size, perfectly round; colour bright green, dashed with a few streaks of red. The pulp is very firm, and full of fine acid juice, and excellent for culinary purposes. It makes a fine healthy tree, with strong, spreading, brown-coloured shoots; buds thinly set on the branches, though generally a good bearer. It should have a place in the first class in the orchard; it being a very profitable family apple, and keeps without shrivelling. This variety was raised by a person, whose name it bears, near Lancaster.

122. *Reinette Grise*. — The *Pomme Grise*, or grey apple of the French authors, is a highly-valued fruit in that country, and long cultivated both in England and Scotland. Of late years it has been newly introduced, along with the *Fameuse*, by a Mr. Barclay,

of Brompton, who has distributed the sort among the nurserymen there and elsewhere. The fruit is middle sized, round, and flat; the colour yellowish, with many russet spots, sometimes tinged with red. The pulp is firm and juicy, and of a pleasant acid flavour.

It appears that the French have several grey reinettes. Considerable quantities are imported from Normandy, for the London fruiterers, every year; for which, in the month of May, they charge from six to nine shillings per dozen. The grey reinettes grown in England are inferior to the imported fruit, being very apt to shrivel; though this may be more from neglect of the keepers than from real inferiority in the fruit. The tree belongs to the second class in the orchard, and is a good bearer under any mode of training.

123. *French Reinette*. — In season from January to May. It is one of the best of reinettes, inferior only to the golden. It was selected from the collection imported by Sir P. Stephens, and has been cultivated by the author ever since. The fruit are large, round, and handsomely shaped: transverse diameter greatest. The stalk is short, the apple sitting close on the branch; the eye hollow; colour a light-green a little tinged with red, the whole bespeckled with brown. The pulp is very firm, juicy, and of a high pleasant flavour; insomuch that, though large, it is acceptable in the dessert. The tree grows healthily, though not vigorous; the shoots whitish, with large leaves and prominent buds. It is an early and good

bearer ; should have a sheltered situation among the second class in the orchard ; makes a good espalier on the crab, or dwarf on the paradise stock. This variety has a higher character in France than in this country, the difference of climate perhaps being the cause.

The following are, from the brown roughness of the skin, called by the general name *Russets*; and comprise some of our most useful sorts of kitchen fruit.

124. *Aromatic Russet*. — Comes into use in December, and continues good till February. This apple is nearly allied to the spice variety, and might have been classed with it ; but, being better known by the above name, it is preferred. The fruit is middle-sized ; colour a light-grey, with deeper brown on the sunward side. The stalk is short, and deeply inserted ; the eye small and sunken ; flesh crisp and tender ; juice richly aromatic, partaking of the flavour of aniseed, and admired in the dessert. The tree is of slender growth, but hardy ; wood and leaves of a whitish hue ; and a good bearer. It forms a standard of the second class in the orchard ; and, from the excellent quality of the fruit, should always have a place in the garden. This, like the other russets, requires a good loamy soil and dry situation. The French have a sub-variety of this fruit, which they call the *Red*, highly spoken of by Duhamel, and which keeps till March.

125. *Golden Russet*. — Is ripe in December, and keeps for two months afterward. The fruit is

middle sized, of a regular oval shape: stalk very short; eye small and hollow: colour a light grey russet dashed with bright red, the whole turning to deep yellow when ripe. The flesh is firm, moderately juicy, and high flavoured. It may be presented in the dessert, but its chief use is for the cook and confectioner.

The tree is of a healthy habit, not nice as to soil, and forms a good standard in the second grade in the orchard. This apple has been extensively planted in Kent.

126. *Sykhouse Russet*. — Keeps from December to March. This apple was introduced into the London nurseries by the late Mr. Grimwood, sen. The fruit is about the size of the nonpareil, rather more oval; eye open and in a hollow. The colour a light russet, but deeper on the sun side. The skin is very thin: the pulp crisp, and melting; the juice abundant, and of exalted flavour, in every sense suitable for the dessert. In growth the tree resembles the Margill, but shoots more upright. It belongs to the second class in the orchard, but does best as an espalier. With proper care this apple will keep till the middle of April.

127. *Acklam Russet*. — In use from November to February. This is a famed Yorkshire apple, named from the village and its proprietor where it was first raised. The fruit is about the middle size, and of a round handsome shape. The colour pale green, partly covered with a thin coat of russet. The flesh is very firm, well charged with juice of a fine vinous

flavour, and estimable in the dessert. The tree is of diminutive growth but very hardy, and with ordinary care, will make a standard of the third rank. It dislikes strong moist land, and should only be planted in dry light soils.

128. *Pile's Russet*.—Comes into use in December and keeps till March. This is a very old inhabitant of English gardens, and highly valued by the cook and confectioner. Miller mentions it in the first editions of his Dictionary, as excellent for making comfits. The fruit is a full middle size, of an irregular oval shape; colour a dark green, with a covering of russet next the sun, sometimes tinged with a faint red. The pulp is firm, and full of a very fine acid juice. The tree is healthy, not subject to blight, nor preyed on by the American pest. It makes a standard of the first class in the orchard, where only it does best. It is not a first-rate bearer: but it has one good property, the fruit improves by keeping.

129. *Wheeler's Russet*.—Keeps from December till May. This is a very excellent old variety of kitchen apple, and found in many old orchards. The fruit is about the middle size: colour wholly russet, skin rough; flesh firm, and moderately juicy and of good quality, which it retains to the last.

The tree is generally healthy, and makes a good standard of the second class in the orchard. It is a good bearer, and deserves a place in every collection. Any soil suits it except a strong damp loam, in which it is liable to canker.

Of this fruit a mistaken notion is got abroad, that it is worn out, and not worth cultivation; and the very slight notice bestowed upon it, in some recently published catalogues, might lead the public to believe, that the Wheeler's Russet is no longer worth notice. To prevent either prejudice or ignorance throwing such a valuable apple into disrepute, the author begs leave to represent, that he can appeal to a thousand instances where the tree may be seen of all ages, thrifty, prolific, and profitable, and as well worth cultivation as any of its class.

130. *Royal Russet*.—Is in season from November to May. It is one of the most valuable apples for culinary purposes that ever was raised or cultivated. Whether it was known to the French pomologists Merlet and Duhamel is not very clear; but both Langley and Miller describe it perfectly. The latter excellent writer speaks of it thus, — “The Royal Russet is a large, fair fruit, of an oblong figure, broad towards the base; the flesh inclining to yellow. This is one of the best kitchen apples we have, and is a very great bearer. The tree grows large and handsome, and the fruit is in use from October till April, and is also a pleasant fruit to eat.” This description appeared in the first edition of his Dictionary, published in 1724, in two 8vo. volumes, price fifteen shillings. Little did he know at that time, he was laying the foundation of a work, which in little more than a century would be sold for fifteen pounds!

From the vigorous growth of the tree it stands in

the first class in the orchard ; it may also be trained as an espalier ; but for garden purposes it requires to be dwarfed, by being worked on the paradise stock. The naturally robust habit of the tree renders it safer from the attack of the American blight than other weakly growing trees ; and the fruit sitting closely to the branches, it sustains less damage from gales of wind.

Many complaints have lately been made of the liability of the royal russet to canker. These complaints have materially checked the sale of young stock, and subjected nurserymen to loss. But the Author is confident, that if the precautions advised to be taken in the case of the golden pippin, be followed with the tree in question, no fears need be entertained, but that this may be restored to its pristine health and fruitfulness.

In the foregoing notices of the best kitchen and table apples, such of them as are also good cider fruit, have been so announced, *viz.* the Golden, Farleigh, Downton, Ribstone, and Isle of Wight pippins ; Loan's and Winter Pearmain ; and the Golden Harvey : — but there are a few more, which are specially called cider apples, and have been long famed for the manufacture of that useful liquor : they are here described by themselves, *viz.*

131. *Cocagee*. — Is a middle sized fruit, oval shape, light yellowish colour ; skin smooth, and dotted with brown. The pulp is not very firm, but abounds with an austere acid juice, not at all pleasant to the taste. The tree is hardy, grows well in

any dry loamy soil, and makes one of the first class in the orchard.

Cocagee cider was formerly highly prized for its rough flavour, but is now not so much in repute; there is still, however, a fair demand for it.

132. *Foxley*.—This variety originated with Mr. Knight, who thinks it equally good for the press as the golden pippin. The fruit are small, nearly round; colour fine yellow, much dotted or speckled, a little marbled with red, and growing in clusters like Hughes' golden pippin. The tree is hardy, and a great bearer; succeeding well on moderately strong loam, and in an open situation. It is well worth the attention of every planter.

133. *Red Streak*.—Is a famous and very old cider apple, of a beautiful yellow colour, richly streaked with red. The fruit is of the middle size; flesh firm and juicy: in some seasons not to be despised in the dessert. The tree does not arrive at a large size, but forms a handsome standard of the second class. It is an early fruit, a good bearer, and makes a fine smooth cider of the first quality. It is said to be failing in Herefordshire, though not generally so in Devonshire: for in the latter county, although partial decay be visible, it is only in consequence of neglect or mismanagement.

134. *Grange Apple*.—A very good cider variety, raised at Downton Castle by the indefatigable proprietor. It was produced from seed of the orange pippin, fertilized by the pollen of the golden pippin, to both of which it has some resemblance. The

fruit are small and round, of a clear yellow when ripe: the pulp firm and juicy. The tree grows healthily, ranges in the second class, bears well, and is not a bad apple for the dessert. The fruit require to be laid up for a month or two after they are gathered.

135. *Devonshire Wilding*.—Is a favourite sort in North Devon for the manufacture of rough cider of great strength, so much relished by the labourers of that country. The fruit is middle size, nearly round, and flatted at the ends; colour yellowish green, dotted with brown; the stalk short and thick, and closely attached to the branch, and hanging long on the tree. The pulp is firm, and well charged with a sharp acid juice. When cider is made from it alone, the fruit are kept for a month or two before going to the mill. The tree grows strongly, and rises to rank in the first class in the orchard; and is, like most of the cider apples, very seldom attacked by the American insect.

136. *Styre*.—A very old cider apple extensively cultivated in Gloucestershire, particularly in the light lands adjoining the Forest of Dean, in which place, according to Mr. Knight, it produces a stronger cider than it does on the deep soil of Herefordshire. The fruit is about the middle size; colour light yellow, shaded with red next the sun. The tree is a good bearer. Styre cider is accounted superior; and Mr. Knight states, that it may be found in the neighbourhood of Chepstow, in Wales, thirty and

forty years old! This apple ripens early, and in this respect follows closely on the redstreak.

137. *Fox Whelp*.—Is another old celebrated cider apple, producing a fine rich sugary liquor, with which many of the finest ciders of Herefordshire are compounded, it adding both strength and flavour.

138. *Red Must*.—Is one of the largest cider apples cultivated in Herefordshire. Though not in such high estimation as formerly, it will be kept in cultivation on account of its forming a contrast to the Styre; this last producing the best cider from light soils, while the Must yields the best from strong heavy land.

139. *Woodcock*.—Was formerly in high estimation as a cider fruit, though perhaps less cultivated of late years. It still however has its admirers, and is too good an apple to be lost.

140. *Siberian Harvey*.—Is a new variety, raised between the Siberian crab and the golden Harvey, by Mr. Knight. The fruit is about the size of the golden pippin, and ripens about the middle of October. It is recommended by Mr. Knight, who states his opinion, that this and the Foxley are superior for the press to any hitherto in cultivation. The juice which it yields is uncommonly sweet.

It will be observed, that seven of the above are of long standing as cider apples, and most of them are still valued in making that liquor. The other three have been raised by Mr. Knight, to whose very excellent treatise on the culture of the apple and pear,

and the making of cider and perry, the reader is referred, as containing the best information on the several subjects therein treated. From that work the following general observations relative to cider fruit are extracted, *viz.* : —

“ Almost every variety of apple, possessing *richness* and a *yellow colour*, when ripe, is capable of making fine cider, either alone or mixed with others.”

“ In Kent, where much fine cider was formerly made, the manufacturers were not very particular as to the sorts, but more to their time of ripening :” it being necessary, it seems, that whatever different kinds were used they should be ripe together. It also appears necessary that cider apples should be capable of being kept for a few weeks before using. Their constitutional properties of remaining so long sound, being a necessary quality on which the strength of the cider depends. Hence it follows, that the best keeping apples make the best cider : and that that which is made latest in the season, must necessarily be the strongest. Mr. Knight combats the idea that good cider can only be made in certain districts ; for he observes, that wherever the fruit is best, or sufficiently ripened, there may the best cider be made.

Grab Apples.

There are only two sorts in cultivation for domestic purposes, *viz.* the *scarlet* and the *yellow Siberian*. These small beautiful fruit are only useful for pre-

serving, and are best cultivated as standards. The wild crabs of our woods and hedges are used by nurserymen for apple stocks ; and from their fruit is made that useful liquid, verjuice.

Apple Orchards.

The foregoing account of our best apples, the author conceives, would be very imperfect, unless he also adds a few of his ideas concerning orchards, and the manner of planting them. Notwithstanding he has already alluded to this matter in the introductory remarks, and occasionally in the catalogue, he thinks a repetition of the principal directions will not be considered superfluous, as an appendix to the section on the apple.

It has already been observed, that the situation of an orchard should neither be on the top of a hill, nor in the lowest part of a valley. For this rule the reasons are obvious, and have been already stated. The best aspect, and the best soil, have also been described ; together with the necessary depth of surface soil, and the great care required in keeping the roots of the young trees as near the surface as possible. It only remains to add in this place, the best distances at which the trees should be planted, with the manner of planting, protecting, and pruning the trees after they are planted.

Old pasture land is better for fruit trees, than that which has been long under the plough, merely because it is less exhausted, and consequently contains more of that decomposed vegetable and animal matter,

which is so peculiarly fitted to be the food of trees. If a spot of this description be fixed on, the first thing to be done is marking the places of the trees. These should be in rows, ranging from north to south, or as near to these points as may be. The distance of the rows apart should be forty feet; and the spaces from tree to tree, in the rows, should not be less than from twenty to twenty-five feet. The holes, for the reception of the trees, ought to be circles or squares, of not less than six feet over, trenched eighteen inches deep: the turf being thrown into the bottom, or kept to be relaid on the surface. This work should be done about the first of October, or a month sooner if convenient. If the soil be not exactly what could be wished for the trees, either as respects its openness or quality, a barrowful or two of fresh light loam may be added to each hole to encourage the speedy striking root, and to admit of higher planting than could be done on a level surface, without some additional soil being laid on. But, if the natural soil be good free loam, no extra earth will be necessary. In some cases, keeping the broken ground round the trees open for a year or two, for the purpose of forking in some top dressing, is sometimes practised; but neither is this necessary, if the general surface soil be as described.

The holes being ready, the next thing is the choice of the trees. They should have straight, clear stems, of the proper height, say six and a half feet; and should be such as have not been more than twice headed-in in the nursery; and that their yearling

shoots be strong, healthy, five or six in number, and stand at regular distances from each other, and without dead knots or cracks between them, to induce the nestling of insects, or canker. These shoots, being properly pruned, form the future head of the tree; and which, to be regular and well balanced, depends entirely on the skill of the first pruner.

Besides securing good healthy plants of the right age and form, another thing must be thought of, and that is, the kinds to be chosen. Perhaps the best rule to be given on this point, as before observed, is to look round the neighbourhood, and ascertain what sorts do best. Many kinds of fruit trees have local propensities, as it may be called; that is, the soil, the situation, and the local climate, with respect to dryness or humidity, are more congenial to some sorts than others; and therefore it is best in most cases, to choose only those which appear to be naturalized to the district, or sorts of similar habits. There is a great variety in the preceding catalogue to choose from; and as the individual characters are given, the planter will have little difficulty in fixing on what will best suit him; minding to place the first class plants to the north and south-westward of the orchard, the second class next, and finishing towards the south with trees of the third class.

It is of little use planting fruit or any other trees in pastures, unless they are from the first properly protected. The stems require to be defended from hares and rabbits by a thickish wreath, or coating of

thorns; and three or four stout stakes should be driven into the ground at equal distances round the tree, brought either nearly together or spreading out at top, and fastened together by cross ledges nailed to each, to defend the stem from the rubbing of cattle. Rough bushes should also project from the top to balk cattle from browsing the young shoots. Such a fence, well constructed at first, and kept effective by repairs if needful, and occasionally well bushed, will defend the trees till they are out of harm's way, and till they are so established as to take care of themselves.

Of the Blight, and other attacks to which Apple Trees are subject.

There is as much care and attention required in keeping fruit trees in health, and free from attacks of insects and parasitical plants, as there is in propagating and transplanting them. Constitutional diseases should always be distinguished from the depredations of insects. Of these in their order, *viz.*

Canker.—This seems to be a constitutional disease, and to arise from a defect in the organization, occasioned by impure qualities taken in by the root from an ungenial subsoil. This is a conclusion come to from experience; because, in low, damp situations, where the subsoil is strong gravelly clay, there the trees are mostly cankered; while the same kinds planted on a light loam, having a dry bottom of rock or chalk, remain perfectly free from the disease. We cannot exactly say how this happens, or describe

what the deleterious qualities are, which derange and destroy the healthy bark and wood of a tree; but knowing what is stated as the cause to be a fact, all we can do to prevent it is, to avoid placing trees in situations where they would be liable and exposed to the disease; or if our land be of that unfavourable kind, endeavour to improve it by draining, or by any other means that will prevent the root from sinking into the noxious subsoil.

Insects — Are the *American aphid* or *coccus*, otherwise called by naturalists the woolly or frothy aphid. This is too well known to need further description. To kill those that are visible, and stop their young from infecting the whole tree, a wash must be made of soft soap and warm soft water, worked together till it is of the consistence of thin paint. This must be laid on the stem and branches with painters' brushes of various sizes, and pressed into every chink or opening of the bark where the insects hide and breed. The action of the brush crushes the old ones to death, and the clammy nature of the wash prevents all movement of either old or young. One application will not be enough to extirpate them, because many of the young are safe and lie hidden under blisters of the bark, which, unless first pared off with a knife, neither brush nor wash can reach. But if this wash be applied hot, and as often as the insects appear, a tree, or any number of trees, may be freed from them in time. Other remedies have been suggested, as inferior vinegar, strong soap suds, lime water, infusions

of tobacco, &c. But whatever application may be used, taking the insect in time, that is at the moment it first appears, will be found the most effectual, and a great saving of time. As this plague is related to the cochineal insect, its blood is almost as strong a dye, and will discolour the linen of the workmen if allowed to fall thereon.

Aphis, or common Green Fly. This is one of the most numerous and common insects, found on many different plants as well as fruit trees; but on the apple least of all. On plums, cherries, &c., they are often hurtful, as well in checking the growth, as in soiling the leaves and fruit with honey-dew which they exude. These insects are easily killed or banished by fumigations of tobacco smoke, wherever it can be applied.

Caterpillars.—Of these there are many different kinds, which prey either on the buds, the leaves, flowers, or fruit of the apple tree. They are mostly the larva of moths, the eggs of which are laid in the crevices of the bark or round the buds in the autumn or spring, and on the approach of warm weather are hatched, eat their way into the buds, and often devour both leaves and flowers. Sometimes the whole of the foliage is destroyed by the caterpillars of a very small moth (*Tinea patella*), which come forth in such myriads as to eat every leaf off whitethorn hedges, as well as those of the apple in sheltered places. There is no way of keeping trees free from these winged insects, unless we could wash or sprinkle the whole tree in the autumn with some liquid that

would be offensive to them. Fumigating the orchard with heaps of burning haulm, or straw sprinkled with sulphur, in the autumn, is said to taint the trees, and drive away the parent insects from nestling thereon. So effectual is this expedient deemed in Normandy, that it is never omitted by the orchardists there.

Parasite Plants. — Such plants as live upon others are called parasites. Of those affecting apple trees, are the rust, mildew, misletoe, lichen, moss, &c. The three last are got rid of by any cutting or scraping tool. Sometimes to prevent moss or lichens fixing themselves on trees, they are smeared with a wash of hot lime and water ; and which is no doubt servicable, as well for the purpose for which it is applied, as for preventing insects depositing their eggs on the bark. Rust and mildew are both funguses, which are easily killed by strong soap-suds, repeatedly applied to the parts affected, or by sprinkling them when wet with flour of brimstone alone, or mixed with soap-suds. These remedies must be applied in the garden when necessary ; but it is seldom they can be conveniently employed in the orchard. The author has found soot, or rather the effluvia of it, to be very offensive to many insects, by only strewing it on the ground under the trees.

Gathering and Preserving Fruit.

That there is a proper as well as an improper time of the day for gathering summer fruit of all kinds, is not perhaps so generally known as it should be ; and

that there are improved methods of preserving it when gathered, will be readily admitted by all who wish to have it in perfection. This is a necessary part of the knowledge of those who have the charge of the fruit room; and as the author has had much experience in this particular of the gardener's business, he has to offer a few directions thereon, which he trusts will be acceptable, especially to his young readers.

All summer fruit should be gathered in the cool of the morning. They are then more juicy, and higher flavoured. If gathered in the heat of the day, they are vapid, and not half so refreshing to the palate as when gathered before the sun has much power.

Fruit baskets should be made of any light material, chip or wicker-work, either round or square, with cross handles; and with rims about two and a half inches deep. There should be one for each kind of fruit, and covered within with vine leaves to receive them singly, as gathered. This refers to all fruit which are gathered from the tree on the day they are to be used; such as early apples, pears, plums, peaches, &c. Some kinds show when they are ripe by the colour and transparency; some by their scent, but most of them by the ease with which they quit their hold of the tree. Handling them to judge of their ripeness is a bad custom; because the least pressure of the thumb and fingers is sure to injure both the appearance and quality. Almost all kinds ripen unequally: the firstlings must be picked as

they are ready ; but if they quit the tree spontaneously as soon as ripe, the whole should be gathered together a day or two previous, and laid singly on thin layers of clean straw, dry fern, or moss, on the shelves of the fruit room. Early kitchen apples may be laid in small heaps, and lightly covered to exclude the air, in which state they will keep longer than if lying exposed.

The shelves for fruit should be made of some scentless wood : white poplar, beech, or wainscot oak is best. Deal is apt to impart a resinous scent. A fruit room should be a cool place, and capable of being kept free from the changes of weather ; an equal temperature is of the last importance for the keeping of fruit ; and for which purpose the windows should be fitted up with well-made shutters.

Before the winter fruit are laid on the shelves, each sort should be carefully gathered when dry, and laid in separate heaps on the floor of the room, and closely covered up for eight or ten days, not longer. After this time they should be each wiped with a clean cloth, laid on the shelves upon straw singly, and covered with a thin layer of the same.

All fruit intended for keeping, should be gathered *just before*, rather than after they are ripe ; this does not prevent their perfect ripening, and prolongs the period of their keeping.

There are several other modes of keeping fruit which may be mentioned : *viz.* first, in jars, or in any other air-tight vessel, embedded in sand. For this manner of packing fruit, the finest sand should be

procured, and thoroughly dried in an oven ; a layer of sand is first put in the bottom, on which a layer of fruit (the eye towards the side) is placed and covered with sand ; next a layer of fruit, and so on alternately till the jar is full. The fruit are so disposed, that no two touch each other : and when the jar is filled and shaken down, it is plugged or bunged up, covered with wax, and tied over with bladder, or white leather, on which the name of the fruit is written. The jars are stowed away in a dry cellar ; and in this way apples and pears have been preserved good for twelve months.

Pitting apples, like potatoes, has lately been practised, and succeeds very well. It is a German custom : and when there is no other convenience for storing the fruit, it may be had recourse to. Choose a perfectly dry spot of ground, dig out a trench five feet wide, of any required length, and one foot deep from the natural level of the ground. After the sides are sloped, cover both them and the bottom with turf, the grass side outwards, on which the fruit are laid, two and a half feet thick, but highest like a ridge along the middle. The apples are then covered closely up with turves, the grass side next the fruit : and over all must be laid a covering of dry earth one foot thick. All the best keeping apples may be preserved in this way till the months of March and April ; but it should be observed, that they remain sound but for a very short time after being taken from the pit. Protecting the fruit from the

action of the air and changes of weather, is alone necessary to prevent their decomposition.

There is another very simple way of keeping apples sound, as practised by the author. In a day or two after gathering, let each apple be wiped perfectly dry, wrapped in thin white paper, and packed in a box or basket, with straw at bottom, sides, and on the top. Thus packed, they are placed in a dry, airy room, where they keep extremely well. Apples may be kept by art much longer than pears; but these last may be preserved for a month or two over their time by jar-packing, and placing them deep in the ground.

SECT. III.

OF THE APRICOT.

The apricot being a native of the warmer parts of central Asia, requires the warmest situations we can give it in this country, to save its flowers from destruction by frost, and bring its fruit to perfection in the summer. Hence it is one of our principal wall fruit; and, as it ripens before any other requiring the assistance of a wall, is highly valued.

The different sorts of apricots hereafter to be described, are propagated by budding them on stocks of different kinds, of which the following are the most common; *viz.*—

Apricot Stocks.—These are raised from the stones of the fruit ; but though they have been frequently used both in France and elsewhere, are found not to answer so well as two or three sorts of inferior plums about to be mentioned.

The Muscle Stock.—This is a variety of plum which produces an oval dark-red fruit of middle size ; and, when cultivated for its fruit, is a good bearer : and notwithstanding its inferiority as a fruit, finds a ready sale in market for culinary purposes. It makes a good stock for the apricot, and is extensively used as such.

Brussels, or St. Julien.—This kind of plum is also a favourite stock for the apricot. It has been long employed in this country, though not noticed by Loudon and Wise, in the second edition of their work, published in 1699. The Brussels stock was, however, used in the Brompton Park Nursery long before that period ; and has continued to be propagated as a stock ever since, chiefly for its vigorous and upright growth, arriving at a standard height often in the second year. This variety seldom bears fruit ; and which, when it does, are of a very inferior description. The author conceives that Miller (even in his fourth edition) was very much mistaken in recommending this stock for peaches, as it is by no means well adapted for the purpose, being too full of sap during the budding season. And yet Miller has followers at the present day ; which is more to be wondered at, as they, living so long after him, ought to know better.

The Common Plum Stock. — This is a good stock for apricots, being in growth somewhat similar to the muscle stock, but not so deep a green in the leaf. It has been seen to throw up a bud of an apricot, nearly standard high, in the first season.

There are two other sorts of plums used for stocks, *viz.* the *pear plum* (from the shape of the fruit, which is in no way eatable), and another lately introduced; both of which are only used for peaches and nectarines, and will be described when treating of those fruit.

The above stocks are usually raised from layers, by certain persons called stock-growers; among whom the highly respectable Mr. J. Donald, of Woking, near Guildford in Surrey, is pre-eminent. The stocks most suitable for the different kinds of apricot, will be mentioned in the descriptions respectively.

1. *Masculine Apricot.* — Otherwise called the Red Masculine, is ripe from the middle to the end of July. This sort is one of the oldest in our gardens, being introduced from France in the reign of Henry VIII. The fruit is small, nearly round; of a light-yellow colour marbled with red. The pulp, juice, and flavour, much better than might be expected from so early and small a fruit. The tree is of a more diminutive growth than any other variety, but healthy, and a good bearer. The blossoms open early, and require some kind of protection. It should have a good warm aspect, as it is a desirable circumstance to have the fruit as early as possible.

The space required on the wall for this tree, is twenty feet from each other, on a ten-feet-high wall. If planted nearer, the branches intersect each other in a few years, and cause so much cutting back, that both trees are injured. A rider may be planted between, to occupy the vacant space on the upper part of the wall for a few years, or till the dwarfs require the whole.

In Langley's *Pomone*, a splendid work on fruits, coloured from nature, published about one hundred years back, the masculine apricot is mentioned as ripening against a south wall at the end of May, old style; and which, now-a-days, would fall on the first or second week of June—an earlier period, by a month, than ever that fruit is known to ripen of late years. Almost all Langley's descriptions, as well as those of Miller, fix a time of ripening of fruit much earlier than happens in our times; and supposing these authors correct, we can only conclude that our summers are less favourable than formerly.

2. *Royal Orange Apricot*. — Ripens from the end of July to the middle of August. It is called Royal, to distinguish it from the small orange apricot, a fruit of inferior quality. It has been long in our gardens, being mentioned by Loudon and Wise, who wrote in the time of Queen Anne. It is the best of our early sorts. The fruit is round, considerably larger than the masculine; of a light orange-colour, sometimes dashed with red on the sun side. The pulp is firm, juicy, and of an excellent flavour. The

tree is healthy, and, when worked on the muscle stock, a vigorous grower. Such may do for a wall, as they soon come into bearing; but they are not equal to those budded standard-high on the Brussels stock: for it is quite certain there are but four sorts of fruit trees that do well for standards from the bud or graft, when worked near the ground; viz. peaches, nectarines, pears, and apples. Cherries, when so worked, may shoot strongly, but the trees are short-lived.

The space required by this kind should be somewhat more than is advised for the preceding, more especially as the best fruit are always produced on the extremities of the branches. This tree, in favourable seasons, bears well as a standard in the open ground. One, fifty years old (and which had been planted by Mr. C. Grey, formerly of the Fulham Nursery), bore, in the year 1797, an uncommon load of fruit; of which many presents were made to the customers, who all agreed that the fruit were much superior to those ripened on walls. The soil and situation where the tree grew were dry, the former being a light, sandy loam. The best aspects in the garden for this tree, are the south-east and west; the south seems too hot for preserving the quality of the fruit.

3. *Roman Apricot*.—Is in season from the middle to the end of August. This variety is particularly useful to the cook and confectioner. The fruit is of the middle size, oval, yet somewhat flattened; colour deep yellow, which colour also pervades the pulp.

Juice not very abundant, but pleasantly acidulous, which makes it more esteemed for preserving. The tree is hardy, and an excellent and early bearer. When required for preserving, the fruit should be gathered a little before they are ripe.

The aspect should be the same as is advised for the last; and for dwarfs the tree should be worked on the common stock: the muscle is sometimes preferred, but without any good reason being assigned. The inter-distance and space required should be the same as the last; and when it has arrived at its full size, the less the knife is used the better.

This variety is sometimes called the Algiers, and is said to be the Brussels or Turkey of others. It is a pity it should be called by so many names; as it is a disappointment to the purchaser, who, believing them to be different, orders the whole, and thereby gets the nurseryman an ill name.

4. *Hemskirk Apricot*.—Comes in for the table about the first of August. The country is indebted to the late lamented Mr. Lee, of the Hammersmith Nursery, for the introduction of this fruit. It is a handsome, middle-sized apricot, and nearly round; in colour it resembles the orange variety, having a firm pulp abounding in rich juice. The habit and growth of the tree is like the Moorpark, healthy, and a good bearer. The best aspect is either an east or a west one, the south being rather too warm to have the fruit in perfection. The space for this tree may be the same as the last, but regulated by the quality of the soil. In strong rich loam, it should have

more room than if planted in light very dry ground. The best stock is the muscle for dwarfs, and the common for standards. The flowers of this variety being large, are more tender than the smaller flowering varieties ; and, consequently, require more care in defending from frost.

This is certainly a very distinct variety, and inferior to none for flavour or bearing : and, after more experience, it will be found as hardy as those that follow ; it will be a valuable acquisition to the British gardener.

5. *Breda Apricot*.—In season during the month of August. This is one of our best apricots. The fruit are about the size of the orange variety ; roundish, yet somewhat irregularly formed : colour a reddish brown on the exposed side, and dotted with brown spots ; the shaded side and the pulp are yellowish, the latter firm, and nearly equals the Brussels in quality when grown on standards, in which way the tree is sometimes cultivated. It is a healthy grower, and good bearer in favourable seasons. The wood, leaves, and buds are very like those of the Moorpark, which is only an improved variety of the Breda. The improved kind was originally planted in the garden of that celebrated place, while occupied by a Lord Dunsmore, and hence obtained the name of Moorpark.

The best aspect for the Breda should be the same as the preceding ; and if planted as a standard, should have a dry sheltered spot. The fruit are so good when ripened on a standard, that, to have

temporary coverings of canvass, elevated on, and fastened to posts round the tree, would not be lost labour, but productive of much gratification to the owner.

When two or more of this sort of apricot are planted together, they should not be placed nearer than thirty feet apart. Instances are on record, of a single tree covering a space of nearly one thousand square feet: such is that at Arundel Castle, in Sussex. The stocks for this sort being the same as the Hemskirk, need not be repeated.

6. *Moorpark Apricot*. — Is ripe from the middle of August till the first week in September. This fruit has in its time received many different names — Anson's, Temple's, Dunsmore, &c. Both the Lords Anson and Dunsmore having resided at Moorpark, three of its names are easily accounted for. That it could not have been introduced by Sir W. Temple (though he also had lived at Moorpark), appears evident from its omission by Miller in his folio edition of 1748; nor is it mentioned by Grey, of the Fulham Nursery, who published his catalogue ten years afterwards. And he (Grey), having at that time one of the finest collections of fruit trees in the kingdom, on intimate terms with Miller, and patronized by Mark Catesby, Esq., was not likely to overlook, or remain ignorant of such a fine fruit as the Moorpark apricot, had it been then in the trade. Another account says, that the original tree was brought from the Netherlands about the middle of the last century, by Sir Thomas Moore,

and planted at Moorpark, then the residence of Lord Dunsmore.

Many fruits have had new names heaped upon them from the most trifling circumstances; and which, as before observed, creates nothing but confusion in the trade, as well as to purchasers.

This fruit, when well grown, is larger than any of its family. It is nearly round, but irregularly so; it having one side a little more swollen than the other. The colour varies: in some seasons it is dull yellow on the side next the wall, with a faint marbling of red on the sun side: in other seasons it is wholly yellow with brown spots. The pulp is firm, but not so much so as either the Breda or the Brussels. The juice is rich and plentiful; and the tree grows strongly, and when in good soil, and well trained, forms a beautiful spectacle.

There are two stocks on which the Moorpark may be worked; on the muscle for dwarfs, and on the Brussels for riders or standards. The space required should be as much as is necessary for the strongest growing kinds, namely, thirty feet from tree to tree, on a wall having a western aspect.

The Moorpark is often observed to grow too luxuriantly, after being a few years planted. During this paroxysm, the trees are unfruitful; and to moderate the growth ought to be the aim of the manager. To induce a more moderate growth, there is no safer plan than taking up the tree and replanting it in the same place. In doing this, perhaps, the cause of the luxuriance may be discovered and removed; at

any rate the transplanting will give the tree such a check, as may induce a less vigorous growth and promote fruitfulness. As this excessive growth is often seen to happen to maiden plants, planted in newly-made borders, it is a more judicious plan to choose trees from the nursery which have already been trained for a year or two. With these there is less risk of over-luxuriant growth, and certainly a better chance of early fruitfulness. For those writers, who have advised the planting of maiden trees, both in new built houses, and for new built walls, twelve feet high, certainly never considered how long such expensive erections would remain unnecessarily barren.

It is remarkable, that this variety of apricot is subject to a defect or malady, which the others are almost free from. This is the sudden failure of an entire branch in the summer months, without any apparent cause. The failure is quite partial; the branch shall be to all appearance in high health, shooting freely, and bearing fruit on one day, and on the next, every leaf will droop; the motion of the sap stops; and the whole branch becomes paralyzed, as if by a stroke of lightning. It is difficult to account for this misfortune: it takes place in all kinds of soil, in every mode of planting, and under the most opposite circumstances; and there really appears no way of guarding against it, until we can first discover the cause; and which discovery, the author believes, has not yet been made.

An apricot was introduced, by the late Duke of

Northumberland, under the name of the *Abricot Pêche*, the peach apricot, from Paris. But this turns out to be neither more nor less than the Moorpark; though some have pretended to have observed a difference; but which, the author must confess, he never could see.

7. *Brussels Apricot*.—Is ripe from the middle to the end of August, sometimes continuing to the end of the first week in September. This fruit has been in our gardens for the last one hundred and fifty years, and when thoroughly ripened, in favourable seasons, on a standard in the open ground, is really a very superior fruit. The fruit are of the middle size, rather compressed: general colour a dull yellow, with a tinge of red next the sun, and speckled with brown and white. It makes a healthy tree; and when planted against an east or west wall bears profusely.

For standards, in the open ground, it has been famed of old; and, certainly, is one of the best for that purpose, if budded on the Brussels stock. For dwarfs, the muscle stock is preferable; and the requisite distance between tree and tree, should not be less than twenty feet on a wall.

8. *Turkey Apricot*.—Ripens between the middle and the end of August; and that so gradually, that the fruit are seen at table longer than any other sort. The fruit are large and nearly round, and of a deep-yellow colour; in hot seasons, brownish next the sun. The pulp is close, the juice rich and abundant. The tree is generally healthy, the young wood

strong; and, bearing large leaves, require the branches, particularly those that lie horizontally, to be kept at good distances. The flowers too, being large, require more than ordinary protection from spring frosts. It bears early; and, when old, cannot be called a bad bearer. For dwarfs and riders, the stocks should be the same as advised for the Brussels; and they require three or four years' training in the nursery before being removed to the garden, where they should be planted at twenty-five or thirty feet distance.

The above are all the apricots which the author can confidently recommend to the planter. All of them have been for many years under his personal inspection and management, and he only writes what he knows from experience. He could have swelled his list with *names*; but he could have added no information after them which would have been worth his while to write, or his reader's to peruse.

On Garden Walls.

As the apricot and several other of our choice fruits cannot be, in every year, brought to perfection without the assistance of walls, it has occurred to the writer that he cannot have a better opportunity to give his opinions on these structures than in this place. He has had occasion to allude to them frequently, in treating of the apricot; and as he shall hereafter have to do so in the sequel of this work, therefore a brief notice of them here will serve for all.

Garden walls are usually built higher or lower, according to the size of the garden itself. They may be too low, and they may be very much too high. From eight to ten feet from the offset at the bottom, to the under side of the coping, is height enough for a garden containing from two to four acres. The foundation must be more or less in depth, according to the nature of the ground on which it is to be built. A firm and solid subsoil must be found, to bear the wall without danger of sinking. The foundation may be twenty-two-inch work; and raised, until two courses are above the natural surface of the ground. Garden walls have been built on arches, for the purpose of allowing the roots of the trees to extend themselves in all directions; but this can answer no good purpose, because there is quite scope enough for the roots of a wall tree in the border in front, without inviting them into the border behind. Arched walls are only necessary for the front walls of vineries or peach-houses.

A wall, ten feet high from the offset, should be sound fourteen-inch work; the bricks well burnt, and of the best quality. The mortar should be composed of lime and sand, such as is made for building malt-houses and the like. The coping should be stone or bricks, projecting one inch on each side over the face of the wall. For the safety of the walls, they should be built with piers or pilasters behind, twenty or thirty feet apart, and projecting four inches from the face of the wall.

Low walls are much more convenient in the

management of the trees, than those requiring ladders to perform the necessary business ; and all fruit trees extended horizontally are for the most part much more fertile, and certainly easier defended and under more control than if trained upright, and high up out of reach : so that two walls of six feet in height, with trees planted at good distances from each other, will yield, during any term of years, much more fruit than one wall of twelve feet in height. True it is, we often see pears or vines trained to a great height on buildings ; but the value of the fruit is (supposing the trees are fruitful) much lessened, when the great trouble and danger of dressing the trees is taken into account. Besides, high walls are by no means necessary for the crops of either a fruit or kitchen garden. A free ventilation is necessary at all times. The effects of high winds are much less to be dreaded than those of foul, stagnated air, pent up all round by lofty walls.

The advantages of walls for the protection and ripening of exotic fruit, need not be insisted on. Their reflection of the sun's light, and retention of his heat throughout the greater portion of the night, are the favouring circumstances which forward as well as defend the tender trees ; and at the same time the branches, being all securely fastened, and trained in any form to the wall, renders them safe from the violence of storm or tempest. Walls of a moderate height, however, are preferable to overlofty ones, more especially if the upper part of them be naked. Many of our best fruits are naturally

dwarfish, and we take pains to make them more so. How ridiculous then it is, to see such dwarfed trees planted against a wall of treble their full-grown height.

For the convenient culture of dwarf fruit trees, low walls are sometimes built across gardens of sufficient extent. These are usually nine-inch work, with pilasters of fourteen-inch work, at about sixteen feet distances behind. The height need not be more than six feet, and on which great quantities of fruit may be produced both in front and on the back; the latter particularly convenient for matting up currants or other fruits required to be kept on the trees after the regular season.

The best form of a garden is a square, or long square, with the angles rounded. The centre of the northward wall is the place for hot-houses, if any be built. The borders, for wall fruit, should not be less than twelve feet wide; and if the bottom be hard and dry (and if not it should be first made so), a depth of eighteen inches of good fresh soil will be sufficient for any kind of tree. These borders should never be cropped with rank-growing vegetables; nor ever dug deeply, but with a blunt-tined fork. In dry summer weather, the surface of these borders should be kept moderately moist, by mulching and occasional waterings; and frequently sprinkled with soot, to deter insects from nestling in the ground or on the trees.

There have been, in former times, many fanciful ideas entertained respecting the best directions or

lines in which garden walls should be built. Some projectors advised, that they should be built in a zigzag form, to obtain a greater variety of aspect, by means of which they expected the fruit season would be prolonged. Others, embracing the same principle, advised the garden wall to be built circular; in order to meet the direct rays of the sun in every hour of the day. Others again advised the south walls to be built straight, but with (at short intervals) segments of circles bowing backwards, to form recesses for every tree. All this was contrived with a view to obtain a greater variety of the effects of light, or greater shelter from the withering winds of March. These notions, however, are all now forgotten; experience proving, that these fantastically-built walls created so many eddies and sudden gusts of wind, that, instead of genial warmth and quiet shelter, they caused cold and bleakness.

Hot walls, that is, walls heated by internal smoke-flues, have been extensively built in the north of England and Scotland; but, without some other covering over the trees, to keep in the heat and protect the excited flowers from sudden changes of weather, the trees seldom bear an earlier crop than those on the common walls. Such structures are therefore not so much in fashion as formerly, as a very little more additional expense will build a proper forcing-house that may be depended upon. For the perfectly ripening of late French pears, hot walls have been often found useful; but for which purpose alone, they are seldom built.

The best aspect for a garden is when so laid out as that the sun shall shine directly up the middle walk at eleven o'clock before noon. The morning heat of the sun being more enlivening to every plant, than from any other quarter.

On the Formation of Fruit Borders.

The author is anxious to state his opinions on this part of the gardener's business, because he has often seen much unnecessary labour and money thrown away for no rational purpose; and has read also very absurd directions given in books for the making fruit borders, which had better never been printed.

In the first place it should be understood, that if the garden has a good staple of fresh loamy soil of the depth of eighteen inches, on a dry subsoil of hard pure gravel or rock, no extra making or preparing the border is necessary, except trenching, and laying it in proper form. No border should be made deeper than one foot and a half. In excavating the bottom there is danger lest it become a reservoir for water, which without such a piece of ditching would not be attracted there at all. If the subsoil be any kind of clay or earth retentive of water, it is not well to disturb it, unless any water lodging in the excavation can be speedily drained away. On such a substratum, it is better to raise the border to the requisite depth by a proper soil brought on, than to sink the bottom. If the bottom be naturally wet, either from its quality or situation, it should be effectually drained; and some pains should be taken to prevent the roots.

being invited into it. This is not easily done unless the whole bottom be closely paved; no other material will prevent the descent of the roots, if invited by nutritive matter or by humidity. Sufficient drainage, and the top soil made and kept as much like that recommended for melons as possible, will go far to keep the roots from running away from the place intended for them.

When the borders are made, levelled, and all ready for the trees, the aspects and distances between should be well considered. Many mistakes are made in planting too thickly; better it is to have two supernumeraries between two principals (the former to be cut away as the latter advance) than have a fine thriving principal to remove, just, perhaps, as it has got to a state of full bearing. The spaces required by each kind of tree, being added to each description in the previous and following parts of this treatise, will be a safe guide for the planter in disposing his trees at proper distances. Another thing which the author particularly recommends is, shallow planting: nothing is more hurtful to fruit trees than deep planting, inducing canker and many other disorders. Allowance must be made for the sinking of the border; and better it is that additional earth be required to cover the roots higher, than that they be sunk too low.

With respect to the different modes of training, the author has only to remark, that he approves the horizontal fashion for pears, cherries, and the stronger growing kinds of plums; the fan method for all the more

delicate kinds of wall-fruit, peaches, &c.; and the upright mode for vines and figs. But though these different fruit trees are trained in the ways above mentioned, in most well-kept gardens, the rule is not arbitrary; because a clever pruner and trainer can put any tree in almost any shape or order he pleases.

Protecting the early Flowers of Fruit Trees.

Almost all our wall-fruit trees put forth their blossoms early in the year, and before night frosts are over. On the protection of the flowers in that season, all chance of a crop depends. Many different kinds of temporary coverings are in use — as old fisherman's nets, the old colours of ships, woollen netting made for the purpose, oiled paper screens, thin canvass curtains, and small twigs of evergreen trees, as well as moveable copings.

When netting is employed, whether made of hemp or woollen, it remains over the trees during the whole season when frost may be expected. Nets certainly repel a considerable degree of frost, as the downright direction of the cold air is warded off by the similar position of the net. Ships' colours, or the material (bunting) of which they are made, make excellent defences against frost; being so light, durable, and easily put up or taken down. Pannels of oiled paper fixed in grooved ledges are sometimes used. One ledge is fastened to the wall above the tree, and the other is fastened to stumps in the ground: the pannels are placed on at night, and

taken off in the morning. Many good crops are secured by these simple means. Canvass curtains fixed to the top of the wall, and drawn up or let down when necessary, are also used; but this material is too thick for the purpose. The old custom of sticking small twigs of yew, or other thin-leaved evergreens, between the branches and the wall, so as to hang over the flowers, is a very good plan; and as they remain constantly, night and day, on the tree till the fruit are fairly set, they are of great benefit as a shelter from frost. There is yet another contrivance which may be noticed, *viz.* iron supports are driven in the wall beneath the coping, on which are fastened thin boards, which, projecting over the whole tree, protect the flowers from the perpendicular descent of frosty air.

But there is another object in using coverings for early flowering trees, which the author particularly recommends to the attention of young gardeners: it is this — the delicacy of all early flowers, it is well known, renders them liable to be destroyed by frost; but few people suspect that they are also subject to be withered and killed by a hot sun: but this is really the case, and therefore the flowers require shading in the middle of the day, as much as they need a covering on nights. This is a portion of the gardener's duty which is too little practised, but never should be forgotten.

It is the rays of the sun too that is the destruction of plants that become frost-bitten during the night. For if such be allowed to thaw in the dark, no

injury follows; or if the frost be thawed off by water, before the sun shines upon the frosted plant, no damage ensues. This appears to be a dangerous experiment, especially on trees which are covered with blossom; but as it is recommended by Miller, and constantly practised by very many eminent horticulturists, there appears to be no doubt of its efficacy.

Defending fruit trees from frost, has formerly been only allowed to the peach, nectarine, and apricot; but it is equally necessary to all other early flowering trees; as the May duke cherry, *précoce de Tours* and other plums; and all the best pears cultivated on walls. These also require shading from a hot sun in the middle of the day; as it may be safely averred, that in early sun-shiny seasons, as much fruit is withered and lost by the action of the sun in the day, as is killed by frost in the night.

In the culture of the apricot, and almost all other kinds of fruit, thinning an over-abundant crop is absolutely necessary. The proper time for this de-fructification is just before the stone gets so hard as to render the fruit useless for pies and puddings. In the business of thinning, the largest and best placed fruit are left, and all the underlings and the worse placed ones are taken away. The age, or rather the vigour of the tree, directs the thinner as to the number to be left; two on every square foot of the space occupied by the tree, will be a very fair crop. A young, or a weakly growing tree, should not be allowed to ripen half that quantity; but on

strong old trees, a heavier crop may be left; especially if wanted for marmalade, or jam, or for preserving.

The above observations, though chiefly applicable to the apricot, are also referable to other kinds of wall fruit, hereafter to be described.

SECT. IV.

OF THE BERBERRY.

This native plant is ranked among fruits, because its berries are used as a pickle, and for garnishing. There are three varieties, *viz.* the large red, the stoneless, and the white.

1. *The Red Berberry.*—Is sometimes planted in orchards, or shrubberies, being both ornamental and useful. The fruit should be gathered like currants, that is, in bunches.

2. *Stoneless Berberry.*—The character of this variety is not constant; many of the fruit having perfect stones; and young plants, raised from suckers, are found to bear both stone fruit and stoneless fruit on the same plant. They are also used for pickling.

3. *White Berberry.*—This is chiefly planted for ornament. They are best propagated by layers; and the plants so raised are not so subject to throw up suckers as plants raised from seed. It has been remarked of this plant, that when the flowers are

fading, they evolve a most disagreeable scent. They therefore should not be planted near public walks. The bark has been used medicinally, and for dying; and the young leaves were formerly used in salads.

SECT. V.

OF THE CHERRY.

This fruit is found in a wild state over almost all Europe; but it is said, that the first large variety was a native of a town in Asia, called *Cerasus*, by which name it was known to the Romans, and by whom it was introduced into various parts of western Europe. As early as the time of Henry VIII, there were cherry gardens in Kent; and there is an account of one in that county, of thirty-two acres, which, in the year 1540, produced as much fruit as sold for one thousand pounds sterling! an enormous sum in those days, when the rent of land was only about one shilling per acre.

The best soil for cherries, is a light sandy loam, upon a dry subsoil of rock, or hard compacted loam, free from moisture. And when borders are made for cherries, they should be as near as possible of the like description; only the trees require a deeper staple than is necessary for other kinds of fruit. Like most other fruit trees, they require but a very moderate quantity of rich dung near the roots; which produces a luxuriance, neither favourable to the

only in...

tree, nor conducive to the quality of the fruit. A top dressing of soot, frequently applied, is particularly serviceable to cherry trees, as well to the roots, as for keeping the tree free from insects; the effluvia ever rising from the ground, acting offensively to the insects, whether they crawl on the ground or fly in the air. The aphis or green fly (though it is often black when feeding on the cherry) is a sad pest. They lodge and live on the points of the young shoots, distorting the leaves and stopping the growth. Their excrement is what is called honey-dew; which is copiously discharged over the leaves, and from its thick clamminess, closes the pores, and checks the perspiring functions of those organs. Fumigating the trees with tobacco smoke, syringing them with tobacco water, or dusting them when wet, with Scotch snuff thrown on by a powder puff, are the only means of killing or driving the fly from the trees. It is best to apply some one of these remedies as preventives, for none such can be administered after the fruit begin to ripen. Fumigating trees in the open air, either on walls, espaliers, or standards, is done by means of a fumigating cloth made of thin canvass, and of sufficient size to cover the tree, while the smoke is puffed under by the fumigating bellows.

Whole quarters of cherry stocks are sometimes totally lost by the attack of insects. Fine slacked lime, mixed with one-third soot, strewed over the trees in a dewy morning, will be found beneficial: or by adding water to this mixture, in a shallow

vessel, and bending the infected shoots, till the tops are immersed in it, will certainly destroy the insects.

Cherry trees are sometimes subject to the loss of sap, which, when exposed to the air, becomes thickened, and is called gum. It proceeds from external wounds, or from wind-shakes in the branches or stem. The remedy is cutting away the diseased parts, and covering the wound with grafting clay, in which a good portion of soot has been incorporated.

The proper stock for grafting or budding the different sorts of cherries upon, is that raised from the stones of the wild black cherry, as preferable to every other. The fruit for stocks should be gathered when fully ripe, and laid up in dry sand till the spring: when upon the first appearance of the stones opening, they should be sown in beds of dry light soil, about three or four feet wide, and well defended from birds and mice.

Descriptions.

1. *May Duke*.—Comes into use about the beginning of June and continues till August. This excellent cherry is so well known, that a minute description of it is unnecessary. For early prolificacy the *May duke* is unequalled; and though there have been many pretended varieties of it, and to which new names have been given, they are all reducible into the old original, first introduced into this country from France, above one hundred and fifty years ago. It is mentioned by Duhamel, and before him it is

described by M. Merlet, under the name of *Cerise Royale Hative*, a character it well deserves, as being not only early, but worthy of being partaken of by the greatest monarchs that ever swayed a sceptre.

The author trusts to be forgiven for introducing in this place, a little history of a famous old May duke cherry which stood against a south wall in the Royal Garden at Richmond, probably planted in the reign of George I. The fruit from this tree often served to regale the royal party, particularly on the sovereign's birth day (4th June); and many a dish was gathered by the author for the Prince of Wales and Bishop of Osnaburg, when on mornings they visited their royal parents at the lodge. This tree was not only remarkable for its early ripening, great crops, and excellence of the fruit, but for the state of its stem, which was then, and had been for many years previous, stripped of the greatest portion of its bark; a narrow strip only next the wall, being the only channel between the root and the head. The tree produced but little wood: in fact, only annual spurs which were covered with flower buds. This tree, together with the Royal Lodge to which it belonged, were all cleared away about the year 1772.

In considering the state of this tree we cannot help adverting to the popular doctrine, which enjoins the belief, that there is a circulation of the sap; and the author seizes this opportunity of declaring his opinion thereon. He never saw the smallest proof of any thing like a circulation of the sap in

vegetables : it evidently continues to rise during the growing season, but never returns : what is in the branched head of a tree when the leaves drop, remains in a congealed state all the winter, and until the warmth of spring again puts it in motion. Much indeed has been written on this subject by vegetable physiologists ; but their writings will never be comprehensible by common understandings, till they drop their ridiculous *parade of hard words*, by which the phenomena they treat of, are ten times more obscured than elucidated ; and what is worse, much of this obscure matter is published and republished from one periodical to another, till it becomes actually nauseating.

When the May duke is planted as standards in an orchard, the trees should not be placed nearer together than thirty feet each way ; on a wall twenty feet distances will be enough ; though if the soil be light, nearer distances will suffice. Any aspect suits this cherry ; but to have the fruit for the table as long in the season as possible, trees should be planted on every aspect ; for those fruit from the north aspect will be fully as acceptable as the earliest from the south wall.

As cherries are eagerly preyed on by birds, they require netting over to preserve them. In the Royal Gardens it used to be a custom to bag the fruit singly about the twelfth of August, the birth day of his late Majesty George IV. On these occasions a numerous squad of young men were employed, and who were jokingly cautioned by the

good Mr. Aiton, to “beware of the temptation before them:” such however was their feeling of loyalty, and of personal respect for their kind adviser, that not a cherry was tasted. The author cannot recal these early scenes of his life to memory without some pangs of regret. The king, and masters whom he served, and all his fellows he served with — all are gone ! except one only (Whitman, formerly gardener to the Duke of Marlborough) and himself. The fruit so protected continued good to the end of the first week in September.

The May duke is the best of all of its kind for forcing. A cherry house properly constructed, planted, and managed, is one of the most useful and gratifying exhibitions of the gardener's skill. The beauty, profusion, and deliciousness of the fruit on the tables of the opulent during March, April, and May, is well worth all the expense and care bestowed on their production. An equal and moderate degree of artificial heat, a moist atmosphere, and liberal supply of water, are all that are necessary in a cherry house. When young trees are planted and established in pots, they may also be forced most successfully, in any hot house moderately heated : but they cannot bear violent forcing ; nor should it be endeavoured to ripen the fruit sooner than March or April. Budded dwarfs should be preferred for potting, and placed in rich loamy soil. The pots or tubs should be sufficiently large, and room enough

left at the top to receive top dressings of mulchy manure for nourishing the roots.

2. *Knight's Early Black Cherry*.—Ripens about the beginning of July. This is a fine new variety, raised by the President of the Horticultural Society by a union of the biggareau and May duke; the latter being the male parent, but from the colour of both it has “sported.” The fruit is middle size, not quite regularly shaped, the colour nearly black when ripened on a south wall, to which it is best adapted. On a standard the colour is not so intense; though the pulp is firm and juicy. Whether trained on a wall or as an espalier, the branches should be kept at good distances from each other, otherwise the large leaves cause too much shade. The required space about the same as the May duke.

3. *Knight's Elton Cherry*.—This is another variety originated from the same source as the preceding, and ripens about the same time. The fruit is heart-shaped, of a good size, the colour being a marbled red and yellow: the flesh is firm, and though not very juicy, is rich and well flavoured. The tree bears better on a wall than as a standard, and if planted as the latter, it requires a sheltered situation. The aspect on walls should be either east or west, and trained in pretty open order. Twenty-four feet distances are requisite, it being a vigorous grower.

4. *White Heart Cherry*.—Ripens about the middle of July, and continues to the beginning of August.

This is a very old and well known fruit, which with the black corone, and Kentish, were cried about the streets of London seventy years since, and sold for "a penny a pound." This variety came originally from France; its name indicates the shape, and in size it varies according to the nature of the soil on which it is grown. The pulp is firm, with a rich juice; and the tree is an excellent bearer, though of a straggling and spreading growth, consequently requiring more room in the orchard than the May duke.

At present the white heart is not so extensively planted as it deserves to be; it is profitable wherever it is, and it has one valuable property which others have not, *viz.* it is proof against cracking in wet weather.

5. *Royal Kensington Duke*.—This variety was received by the author from Mr. Hewit of Brompton, who propagated it from a tree left by Mr. Jefferys, and who considered it to have been introduced from France by London and Wise. This is likely to be true, as it is particularly noticed in Merlet's catalogue. The fruit very much resembles the May duke in size, colour, and richness of juice, only it ripens later, and the tree appears to be somewhat more hardy. It holds a middle place between the May, and the Arch dukes: and as filling up a gap between the two, is on this account a valuable sort. For dwarfs in the open ground, this variety is next to the May duke, and may be trained and managed in a similar manner.

6. *Coroune or Corone Cherry*. — Ripens from the middle to the end of July. This is a famous old sort, and well known in the London markets, where immense quantities are disposed of every year. It is certainly one of our hardiest and surest bearers; the tree growing to very large size — even to that of a timber tree, and for which it is valued by cabinet makers. The fruit are about the size of a well-grown white heart, and of a similar shape, only more blunt at the point, and like that cherry produces its fruit in pairs. The colour is dark purplish black, the pulp very firm, which facilitates their carriage to distant markets, the juice not so plentiful as that of the black heart, but very sweet and pleasant. The tree is not nice as to the soil it is planted in; thriving equally well in gravel on chalk, as it does in light loam on lime stone rock; as may be seen in Herts, Bucks, and the neighbouring counties, where large orchards of this cherry exist. In the counties just named, they have three varieties of this fruit, *viz.* the *Bud*, the *Small Black*, and the *Honey*. The last a very small pale red one, but remarkably sweet, and much used in the manufacture of cherry wine. The corone is remarkable for rising from seed truer to its kind than any other cherry.

7. *Lukeward's Cherry*. — Ripens about the middle of August. A very excellent fruit, much cultivated, particularly in the county of Kent. It was brought to England from Italy by a person whose name it bears, towards the end of the seventeenth century. The fruit in size and colour much resembles the

corone; but in quality is much superior to either that or the black heart. In bearing, it is equal to any of the heart cherries; makes a healthy tree in the orchard, and in the garden deserves a place on an east or west wall.

In consequence of the black heart being considered the more hardy tree, the cultivation of the Lukeward's has much fallen off of late.

8. *Black Heart Cherry*. — Comes to perfection between the middle of July and the first of August. This fine old cherry has been always more or less confounded with the corone in the markets, so that the latter name is seldom mentioned by either sellers or buyers, except amongst the first-rate fruiterers. The fruit needs no description further than its name imparts; the fruit are larger than either of the two preceding, equal in quality to the Lukeward's, and superior to the corone. And yet it has been advised, and by an eminent nurseryman too, that the black heart and other old sorts should be extirpated to make room for the Elton, &c. In this cry he has been joined by other writers, who, in the author's opinion (without meaning any thing offensive), have not had sufficient experience of the merits of the Elton, or any other new sort, so as to enable them to pass such a sweeping condemnatory sentence against our old tried and established varieties.

In orchard planting, the black heart should be allowed space enough, as it grows rapidly when young, and becomes at last a largish tree. The inter-distances should not be less than thirty feet;

even a few feet more is not amiss, as, in cherry orchards, there should always be room for moving the ladder between the trees. When planted as an espalier, or on walls, they should be allowed twenty-four spaces from each other. Any aspect is suitable except the south, which it does not require : neither should it be trained as a dwarf, the duke and biggareau being far better for this purpose.

9. *Late, or Arch-Duke Cherry.* — Ripens in the end of July or beginning of August. The fruit are larger than the May duke, but exactly of the same shape, and rather of a paler colour. The pulp is mellow and juicy, but not so rich as that of the May duke ; but for which it is nevertheless a good substitute. The tree requires, whether in the orchard or garden, about the same space as the preceding, though the growth is more upright. It cannot well be trained as a dwarf, requiring too much knife-work, which is as much disliked by this as by every other cherry. This variety is becoming rather scarce ; owing perhaps to its being a shy bearer when young, more especially if planted in over-rich, deep soils. But if planted in a thin, light soil, and on a north aspect in the garden, it is fruitful ; and, if preserved from birds, is very acceptable in the dessert at so late a season.

It may be necessary to notice here, that there is a variety propagated and sold under the name of *Holman's Duke*. This the author has proved to be neither more nor less than the Arch-duke, grown under different circumstances of soil or situation.

10 *Biggareau, Turkey, or Graffion Cherry*.—Begins to ripen about the middle of July, and continues far into August, if protected from birds and wet; for, from the latter cause, this cherry is more liable to crack than any other of the heart varieties. Nets to keep off birds, and thin canvass to defend from rain, are the usual expedients. The fruit are large, rather flat at the eye, of a pale-yellowish colour, tinged with fine red next the sun. The pulp is firm, and slightly adhering to the stone, which is small for so large a fruit. The juice, though not so plentiful as we find it in some others, is richly and peculiarly flavoured, having a little of the taste of the kernel diffused in it. After three or four years' growth, the tree becomes a good bearer, and ranges in the second class in the orchard. As a garden-dwarf, or espalier, it also succeeds, though of rather rampant growth.

Miller does not mention this cherry in the fourth edition of his Dictionary; nor does it appear in English catalogues till some time after the middle of the last century. It was for some time after its introduction here called the *Turkey Heart*, because it was first received from that country into France. The Dutch call it the *Graffion*; but it is best known by its French name of *Biggareau*. It is a curious circumstance, that this cherry must have been in this country for many years before the merits of its fruit were known. It might, perhaps, have been considered as only the Harrison's heart, and therefore neglected. There was no such cherry in the

royal gardens at Richmond in 1770 ; but the author found two fine trees of it in the Surrendon Gardens in 1780. They grew on a western aspect, and bore very fine fruit. In the Surrendon Fruit Catalogue, they were entered as the *Belle Chevereuse*.

If the biggareau be chosen for a wall or espalier, it should be trained in pretty open order, as the leaves are large, and cause too much shade on the lowermost branches. If intended for garden dwarfs, the stock should be budded about twelve inches from the ground, whence the branches may be allowed to extend all round. It is always an advantage to have some length of stem to a fruit tree, because the farther the sap has to ascend from the roots to the bearing branches, the richer it becomes, and better fitted to bring forward the latent flower buds.

11. *Black Eagle Cherry*. — Begins to ripen about the middle of July, and continues till the middle of August. This variety the author has not had long enough under his care, to enable him to speak with certainty of its merits ; but he has had good reports of it from those who have seen it in perfection. From the appearance of his young trees, however, he can venture to say, that it promises to be a strong grower, requiring open training on warm walls or sheltered espaliers ; as, from the grossness of the shoots, they require well ripening.

This variety is said to have been raised by a young lady of Mr. President Knight's family, from the seed of a Biggareau fertilized by pollen of the May-duke.

12. *Ansell's Fine Black Cherry*.—Ripens from the middle to the end of July. This tree grows healthily, and yields fruit having a fine firm pulp; a desirable property for distant carriage. Though not a superior, it may be a profitable sort in a cherry orchard.

13. *Black Circassian Cherry*. — Ripens about the middle of July, but varies with the season. The fruit is large, irregularly heart-shaped, of a shining black colour when fully ripe; the pulp is not so firm as that of the corone; the juice is rich and plentiful; and the tree is in general a good bearer as a standard. It is, however, better adapted for garden than for orchard culture, the fruit being too tender to bear carriage. The treatment recommended for the biggareau will suit the Circassian, as well as to space as situation. It has been recommended for forcing; but as the author has had no experience on this point, he presumes not to say how far it may answer for this purpose.

Many contradictory accounts are given relative to the time of introduction of this cherry into English gardens. A Mr. Reynolds announced his possession of it in 1794; and Mr. Frazer, of Chelsea, introduced his *black Tartarian* from Russia in 1796. They prove to differ only in name. Frazer, who was a man of enterprising character, and an ardent collector of rare plants, no doubt discovered this cherry in his fatiguing and expensive rambles over north-western Russia, which was certainly well worth sending home; and happy would it have been for himself, had his remuneration (for this and other

varieties obtained and introduced by him) been commensurate with the spirit he evinced in his favourite pursuit. His appointment as nurseryman to the autocrat of all the Russias, was but a poor recompense for all his toil and expensive journeyings in the czar's dominions.

14. *Bleeding Heart Cherry*. — Otherwise called Gascoigne's, or red heart. Ripens about the beginning of August. The fruit is large, heart-shaped, and distinguished from most others by having a small, teat-like point at the end of the fruit. The colour is deep red; the pulp equal in firmness to that of the biggareau, juicy and rich flavoured. The tree grows vigorously, and is well adapted to the orchard: on a wall, or as an espalier, it should be allowed plenty of room. One tree, which the author had under his care at Surrendon, was planted on a north aspect, and yielded little fruit; but on his training the centre branches over, and down the south face of the wall, these soon bore abundantly, and with a very sensible improvement in the quality of the fruit.

15. *Carnation Cherry*. — Ripens soon after the beginning of August. The fruit is large, of a handsome globular shape; the pulp is firm, and not liable to burst in wet weather. The colour is a fine marbled red, and pale white; the juice plentiful, and well-flavoured. Either as a standard in a sheltered place, on an east or west wall, or as an espalier, this variety may succeed; but it is but a shy bearer anywhere.

16. *Florence Cherry*. — Ripe from the middle of July to the beginning of August. This cherry was brought from the neighbourhood of the Italian city from which it takes its name, by a gentleman of the name of Houblon. The fruit is large; of a blunt heart-shape; the colour marbled, somewhat like the carnation cherry; the juice is rich and abundant, with a firm pulp. The tree is of moderate growth, and erect; and therefore is better fitted for training in any way than for standards. As an Italian variety, it is likely to do best in a warm situation.

17. *Waterloo Cherry*. — Ripens from the beginning to the middle of August. The fruit are large, irregularly globular: the colour a dark brownish red, gradually changing to black when ripe: pulp firm, juicy, and the flavour pleasant. The tree is of moderate growth, having a good deal of the biggareau habit; and seems better calculated for garden than for orchard culture. To have the fruit in the greatest perfection, it should have a place on a south-west wall.

This is another of those excellent varieties of fruit, which owe their origin to the horticultural talent exercised at Downton Castle; a young lady in Mr. Knight's family, having been so fortunate as to raise this variety by the same means she employed in originating the Black Eagle cherry. For the Waterloo a silver medal was awarded to the young lady who raised it, by the council of the Horticultural Society of London, as a mark of approbation of the fruit.

18. *Kentish or Flemish Cherry*. — Ripens about the beginning of August. This is one of our commonest, and formerly most extensively cultivated varieties: not only in the county whence it is named, but in every place where a light sandy loam upon a dry bottom prevailed. Notwithstanding the large annual income accruing to the proprietors from Kentish cherry orchards, the cultivation of the kind has rather fallen off of late, a preference being given to the biggareau.

Some writers have endeavoured to make a distinction between the Kentish and Flemish cherries; because Miller used the first, and Langley the second name, though in fact they are identical. In a lately published catalogue, one is said to have “an aqueous” while the other has “a watery” sap, which is a distinction without a difference.

The principal use of this cherry is for the purposes of the cook and confectioner: it being seldom seen in the dessert, unless very well ripened in dry weather; in wet weather it is liable to crack. The trees form thick bushy heads, requiring thirty feet distances in the orchard, or wherever they are planted as standards; indeed, they should never be planted to be trained in any other way.

19. *Harrison's Heart Cherry*. — Ripe about the end of August. This variety very much resembles the biggareau in many respects, the fruit, though inferior, are larger, and not so highly coloured; the shoots are also more spreading, and the leaves more indented. It cannot be compared to the biggareau,

either for bearing or for any other property ; and this is the reason why so few of the trees are met with. The author has been long acquainted with this cherry, and the only qualification it has, is its late ripening, and fine appearance in the dessert, when the fruit can be preserved from the birds. It is not liable to crack in wet weather ; and where a great variety of fruits are required, a tree or two of this, if to be had genuine, are worthy a place in the collection. The management advised for the biggareau will suit the Harrison's heart in every respect. It is stated by Forsyth, that this variety was introduced into this country by a General Harrison about the beginning of the last century.

20. *Morella Cherry*. — Ripe from the middle of July to the end of September. This is one of the most generally useful and profitable of all its family. For the confectioner it is inestimable, and by many refined palates is preferred as a dessert fruit, especially when perfectly ripened. It may be brought to the greatest perfection on a south wall ; but it is a much more certain bearer on a northern aspect, where also the fruit can be longer preserved for use.

The wall management of the morella is peculiar, being more like that of the peach than otherwise. The fruit being borne on the last year's young shoots, requires that a due proportion of these be left on every part of the tree. The size of the fruit is larger or smaller, according to the quantity borne on the tree, and this is easily regulated by the skill of the pruner. In every year, if the trees be healthy, abundance of

young wood is produced, which the pruner has to choose from. An equal distribution of this over all the space occupied by the tree, will give as regular a crop. If too many of these shoots be left, the fruit will be correspondingly small; if left rather thin, the fruit will be very much larger. No wall tree is more healthy or easier kept in order than the morella; and no cherry-tree, if planted in rather a shady situation, pays better as a standard, that is, provided it has its favourite soil.

Among the many thousands of this favourite cherry, which the author has raised, trained, and pruned, in the course of the last threescore years, some he has observed have done better than others; and therefore he cannot withhold a necessary piece of information concerning one instance, in which he saw both the trees and crop in the greatest perfection, and this he does to show his own opinion of what is best for this kind of fruit.

In the Surrendon garden, of which he had charge, a north wall, ten feet high, had a border twelve feet wide, and very shallow, reposing on loose or rubble rock: the soil was a dark hazelly loam, of rather inferior quality. The roots were all very near the surface; those nearest the stem actually above it. Five trees were originally planted against this wall at sixteen feet distances apart; but meeting in a few years, the second and fourth trees were removed, leaving the centre tree at thirty-two feet from the end ones. Even at this greater distance the branches again met; but, during their progress, being kept

very thin of bearing wood, the crops were magnificent!—finer, indeed, than ever the author had seen before, or has seen since. On these circumstances and result, the author begs to observe, that here was no enormously expensive excavation to form a fruit border, three or four feet deep, to be filled up with the finest loam, and richest dung, as the *would-be-thought* first-rate gardening authors have advised! No; the trees were planted on the natural surface, as nature requires they should be, and not buried in deep unwholesome pits, or graves, as has been the fate of thousands of fine young trees, planted within these last fifty years.

Neither was this border ever digged with spades; but slightly stirred with blunt forks, and having a little well-rotted horse dung bestowed every second or third year. There cannot be a more mistaken notion, and injurious practice, than overloading and poisoning the fruit borders with rich dung; it is a cruel robbery of the kitchen garden crops, to do the fruit trees harm instead of good.

In the early training of the morella, the knife should be used freely to gain a sufficient number of leading branches; thinning out the laterals, but *never* shortening them.

Much that has been stated under the head morella, is applicable to many other kinds of fruit; especially those observations relative to the borders, manuring, and shallow planting; and which should never be forgotten by the fruit grower.

21. *Adams' Crown Heart Cherry*.—Ripens about

the middle of July. This variety was raised many years back by a Mr. Adams, of Sittingbourne, in Kent. It is nearly allied to the white heart, but has a deeper tint of red. The pulp is tender, and the juice is plentiful and pleasant. The tree makes a good standard, for which only it is adapted.

22. *Churchill's Heart Cherry*.—Ripe in the middle and end of July. This cherry was much more cultivated a few years after it was first raised, than at present. The colour is bright red on the exposed side, and a clear yellow on the other. The flesh is rather firm, and the juice, though not abundant, is of good quality. The tree grows to be a handsome standard, and being hardy, is best adapted for the orchard. From what the author has seen of aged trees, he thinks it well worth the notice of the market gardener.

23. *Amber Heart Cherry*.—Ripens during July. This is an old inhabitant of our gardens, and valued in the dessert for its fine amber colour. The fruit are globular; pulp tender, juicy, and the flavour pleasant. Being a tender tree and no great bearer, it is better fitted for garden culture on a wall, than as a standard in the orchard; though here, if it has a warm situation, it succeeds; but is nowhere a plentiful bearer. It is mostly met with in very old orchards; the young trees are averse to the knife after they have been once headed.

24. *Lady Southampton's Cherry*.—Comes to table about the end of July. This is a small heart-shaped fruit of a yellow colour: the pulp is pretty firm, but

neither very juicy, nor very rich. The tree rises to a good standard, and for which only it appears to answer best. It has a high character; but this the author has not yet proved.

25. *Late Spanish Heart Cherry*.—Ripens in the end of August. This fruit is chiefly valued for its lateness in ripening. The pulp is firm: the juice not very abundant, but pleasant. The tree is not a good bearer under ordinary management; and to be perfectly ripened, requires the assistance of a warm wall. It is a yellow cherry.

It is above fifty years since the author found this cherry growing on a west aspect, in a gentleman's garden at Cheshunt, Herts. The gardener there esteemed the sort as a curiosity, but complained of its barrenness.

Before quitting the subject of cherry nomenclature and culture, it will be but right to notice a hoax played off on English credulity, by a French speculator, who introduced a cherry under the alluring name of "*Four to the Pound*." Instead of which, one hundred or more of the fruit produced in England, did not, on trial, bring down the scale! The gullibility of the purchasers, showing they were free from suspicion, is more a sign of their honesty than a proof of their prudence: but the delusion seems to be carried on, because the name is still continued in late catalogues. The leaves are certainly uncommonly large, but even they are unsightly.

SECT. VI.

OF THE CHESTNUT.

The chestnut is cultivated in England, either for ornament, or timber, or as underwood. As a fruit tree, the nuts rarely arrive at any degree of perfection. It has been an object with some nurserymen to introduce the best and earliest varieties from the south of Europe, and to dwarf them by working, &c. But it will be long before the chestnut can be raised to the rank of a British fruit tree.

The varieties of the chestnut, such as the shining leaved, variegated, &c., are easily propagated by grafting on the common.

The stocks are raised from the common imported nuts, sowed in a seed-bed in the spring, and transplanted from thence in the autumn into nursery rows; where, after having two years growth, they will be of sufficient strength for grafting.

SECT. VII.

OF THE CRANBERRY.

The cranberry is a native of Britain, and has been long used as a culinary fruit, though but lately brought into cultivation. Large importations are received from North America, and considerable

quantities are annually collected in the north of England, and sent to the London and other markets, whence those who use them draw their supplies.

But it has been lately suggested, that private families may grow their own cranberries, provided they have suitable places to plant them on. As they are bog plants, they require the edge of a pond, or some swampy spot, either natural or artificial; and in the soil, usually found in such moist places, the plants will establish themselves, and yield abundantly. The author is acquainted with several very clever gardeners in the neighbourhood of Southampton, who have succeeded completely in the domestication of this wild plant, which, after being planted, requires very little subsequent trouble.

SECT. VIII.

OF THE CURRANT.

Although this be a native fruit, we are under obligations to the Dutch gardeners for bringing it to that high degree of perfection, which the varieties in our gardens at this time present.

The English name is probably derived from that of the commercial name of the Zante grape, which in a prepared state were purchased at *Corinth*.

As no fruit is more susceptible of proper management and culture than the currant, the author must be allowed to express his regret that there is so

much inferior fruit brought to market, and which, if under proper management, might have been doubled, both as to size of berries, and bulk or weight of crop. It is well known that by a proper disposition of the branches, by cutting away all redundant and unnecessary growths, greater vigour and nutriment will be directed into the principal branches and buds that are left; and if at the same time the soil in which they are planted be sufficiently rich, abundant crops both as to quantity and quality will be produced.

The propagation or raising of young currant trees, is so easy a matter, and so well known, that it is scarcely necessary to take up the time of the reader by describing the process. Suffice it to observe, that young plants are obtained by planting cuttings of the strongest shoots in the autumn, or early spring, on good rich ground. The cuttings may be sixteen inches in length, divested of all their buds except five or six at the top, and dibbed firmly into the soil to the depth of half their length. The shoots produced in the first season will require heading down in the next; and here the attention of the pruner is necessary to form the future head, by leaving the proper number of leading branches intended to be permanent. In the following seasons the proper form of the head is obtained by shortening the leading shoots at an outside bud, which will cause the branches to extend outwards, and leave the centre moderately open. The branches should not be nearer to each other than six inches; the laterals

produced in every year cut down to a bud or two ; and the leader or any reserved shoot cut down to half its length. The spurs on the branches should be kept short : old ones cut out, and the whole kept in snug and healthy order. By this mode of pruning, the trees, when finished, look more like worthless stumps than fruit trees ; but the crops they bear are far superior to those from larger and handsomer looking trees.

Although the currant is usually pruned as above described, that is, like a low bush, it may also be trained as an espalier, or on walls. As wall trees, they are useful in a family. If planted on a south aspect they ripen a week or ten days sooner than in the open ground ; and on a north aspect they not only remain longer in season, but may be conveniently covered up, and thereby preserved till late in the autumn. Every vacant space between old wall trees on any aspect may be occupied by currant trees if required, whether for early or for very late crops. The best figure of training for these situations, is with two main branches turned right and left horizontally at bottom, and bearing branches led from these perpendicularly, at eight or ten-inch distances.

The currant may also be successfully forced in pots. In these the plants should be established for at least a year previous to their introduction into the forcing house. A cherry house, or second division of the peachery, is the most suitable for the currant ; it cannot bear quick forcing, especially when in

flower ; and while in the house should be frequently supplied with manured water.

A deep loam, rich with dung, and on a dry, rather than on a wet bottom, is the soil best liked by the currant ; though it will succeed in almost any kind of land, if not absolutely poor. It must be remembered however, that the richer the soil, and the closer the trees are pruned, the larger will be the fruit ; and if the largest bunches and berries are coveted, much thinning of the bunches, as well as of the summer shoots, must be made soon as the fruit are set.

The white, red, and black are the principal kinds, of each of which there are several (real or pretended) varieties ; but the common and Dutch whites ; the red, and large Dutch reds ; and the black called the black Naples, are the best in cultivation. The white is a more durable tree than the red ; some plantations of the former being known to last for twenty years.

The author has been more prolix on the currant than many may think the subject deserves : but his reasons are, that, considering the great usefulness of the fruit as articles of diet, of confects, and for wine making ; and seeing, in too many instances, the gross neglect, and apparent ignorance of the culture ; he could do no less than give his best advice to those of his readers who may need such information.

SECT. IX.

OF THE FIG.

The cultivated fig is one of the most tender of our wall fruits. It is a native of central Asia, and has long been introduced into this country ; and what is singular, two or three of the original trees brought to London and Oxford above three hundred years ago, are still in existence, *viz.* two on the archiepiscopal palace at Lambeth, and one in the garden of one of the colleges at Oxford. These trees are of the kind now called the White Marseilles.

The Lambeth trees had many years ago arrived at a large size ; and were never pruned, except only to cut out the dead wood. The growth was languid ; producing only spurs, a habit the most favourable for the prolificacy of the tree. The knife is seldom wanted in the management of the fig : pinching off the points of the young shoots during the months of May and June, with the thumb and finger, is the most efficient pruning. The treatment of the fig as to pruning, is less understood by the generality of gardeners than that of any other fruit tree. We often see the tree trained very exactly and beautifully ; but very rarely do we see a good crop of fruit at the same time.

Miller introduced some fine sorts from Italy in his time ; and was a great advocate for a more general planting of the fig in the gardens of the nobility and gentry of Britain. His advice was partly followed

as to the planting ; but his excellent rules and directions as to the management were neglected. In course of time, however, the culture of the fig became better understood ; and we have now in many places figgeries, both within and out of doors, which are eminently prolific.

Our winters have been less severe than formerly ; and to this perhaps may be attributed the better success of the fig tree, as standards, in the open ground. Near Worthing, in Sussex, there is an orchard containing one hundred fig trees ; from which have been gathered one hundred dozens per day, during the months of August, September, and October. There is also in the garden of the late Lord Henry Seymour, in the Isle of Wight, a border under a high wall, having a rank of various sorts of standard figs planted along the middle, which produces immense crops every year. Both these places are within the influence of the sea air, in which frost is never so intense as in places more inland ; but in the neighbourhood of London, standard fig trees often do very well. Fifty years ago, fig trees on walls were regularly matted up to save them from frost, and which is still a good custom in severe weather.

The best soil for figs, is a light fresh loam, from a foot to eighteen inches deep, upon a hard subsoil of rock, chalk, gravel, or even on a compact bed of clay, provided it be perfectly dry. An ordinary degree of moisture is necessary to the fig, but not continual or stagnant water at the roots, which occa-

sions oftentimes the loss of the fruit. The same effect happens in consequence of severe drought; so that extremes should be guarded against. If water be given at all, it should be that manured liquid before mentioned. This application supersedes the necessity of dunging, which should never be brought in contact with the roots, unless it be in a very decomposed state.

A south aspect is most suitable for the fig, when trained to a wall; and the warmest corner of the garden, when planted out as a standard.

Young plants intended for pots, may be raised by either layers or cuttings. Several persons have signalized themselves in raising and cultivating figs, as appears by various communications in the Gardener's Magazine. But no one more for successful forcing, than W. T. Aiton, Esq., royal gardener at Kew; whence the royal table is supplied all the year round. They are most conveniently forced in pots or boxes.

As the fruit that will ripen in the autumn are just visible, and situate at the points of the young wood produced in summer, it is particularly necessary that these should be protected through the winter. The large green fruit that are on the branches at the same time never ripen in the open air, and therefore should be all pulled off before the trees are covered up.

There are various methods of covering. Some gardeners use reed mats, which are convenient, seeing they may be put up or taken down as the

weather may require. Others unnail portions of the branches intermediate between other portions, which are kept in place; the former are laid over the latter, and fixed there; grips of dry straw are then thrust among the twigs and branches thus bundled together, and the whole covered with common garden mats nailed to the wall on each side.

Fig trees may be trained in any form; that is, either in a fan shape, or horizontally, or with two bottom principals led horizontally, from which leaders rise upright at due distances from each other. These leaders produce laterals, which are the fruit bearers, and which, by pinching at the proper time, may be kept snug and very fruitful.

Neither insect nor constitutional disease attack the fig tree in this country. If it be either barren or unthrifty, such circumstances are only caused by neglect or mismanagement.

Figs, like all other fruit, as before mentioned, should be gathered in the morning, and used the same day; as no fruit spoils sooner after being taken from the tree. There are two marks by which figs are known to be fully ripe; *viz.* one is a pearl-like drop at the eye, the other a decay of the stalk of the fruit: being very tender, they require very gentle handling.

It would appear, that many are deterred from planting this fruit tree, from an erroneous opinion that their culture is difficult, and their crops uncertain. But this is a mistake; nothing is so easy as the first, nor so certain as the last, provided the

soil and site be well chosen; and provided also that due care and skill be bestowed and employed.

The author has cultivated but few varieties of the fig; but such as he has presented here, may be depended upon for the character herein given of them; and he flatters himself that there are but few kinds in this country that are superior to those which he describes in the following list. As the fruit ripen earlier or later, according to the state of the weather, the average date, by comparison of several years, is given; and the sorts are arranged in the order of their ripening as nearly as possible. When the colour is mentioned, it refers to that of the mature fruit.

1. *Early White Marseilles Fig*. — Ripens middle of August. The fruit is small, transversely round, and somewhat depressed; stalk short and thick; colour yellowish-white without and within; pulp mellow, though not so much so as some others, yet rich and well flavoured. The tree is one of the hardiest, and a good bearer; is most suitable for forcing, either in pots, or in a figgery built for the purpose. The most successful expedient for maturing the fig, was in a pit two feet wide and two feet deep, built along the front of a peach-house at the earl of Thanet's, Hothfield, in Kent. The pit was filled with good rich earth, and the trees were planted and kept as low standards; and where they remained for many years, annually yielding great crops. Surrendon Gardens, of which the author had charge, was in the vicinity; and where

also there was a fig-house, formed out of an old pine pit. In the latter place the figs were never so high-flavoured as those at Hothfield, owing to the trees being planted in a deep and richer soil. The trees were planted on a trellis against the back wall; the largest branches only were fastened to the trellis; the breast wood was allowed to take its natural course; the extremities only being pinched, every twig became fruitful.

2. *Black Ischia Fig*.—Ripens along with the last. The fruit is similar in shape to the Marseilles, but larger. The colour a deep purple, almost black; pulp reddish, rich, and fine-flavoured. This variety is a good bearer, and answers well in pots.

There were some fine trees of this sort in a pit behind the cherry house in Richmond Gardens, which never failed bearing abundant crops. In the Kensington Garden Catalogue there is a sort named the Black Italian, which probably is no other than the Ischia above described.

3. *Miller's Chestnut, or Brown Ischia Fig*.—Ripens from the middle to the end of August. All the figs under the name of Ischia (from an Italian island of that name), introduced by Miller, are of the first quality, and this is one of them. The fruit are large, and rather globular; colour brown or chestnut. The pulp is of a purplish red, very rich flavour, and melting. The tree is an excellent bearer; and, being pretty hardy, will, in favourable seasons, ripen its fruit on standards in the open air. It well deserves a good wall; against which, it is

almost certain to produce good crops every year. It is also an eligible sort for potting; and, when moderately forced, bears twice in the year. From its thin and delicate skin it is liable to burst in wet weather, against which it should be guarded in the time of ripening.

4. *Murray, or Brown Naples Fig*.—Ripens about the end of August. The fruit are large; shaped somewhat like the last, but not quite so round; colour brown without and within; pulp, though not so rich as some others, is pleasant and melting. The tree is pretty hardy, and therefore adapted for standards in the open air; and, trained as a dwarf, will in fine seasons yield well-ripened fruit in the first week of September. The tree is a good bearer, and valuable for the length of time it continues yielding fruit either on a wall or otherwise.

5. *Brunswick, Hanover, or Madonna Fig*.—Ripe from the middle to the end of August. This variety was introduced in the early days of Miller under the name of *Madonna*, which ought never to have been changed; but, on the accession of George I, it was new named as above. The fruit are large and rather oval, with a short thick stalk inserted in a swollen base. The colour is brownish-white, the pulp partaking of the same hue. It is a rich and well-flavoured fruit; though too much extolled by one writer, who deems it superexcellent, and by another high authority depreciated far below its real merit. The fact is in this, as in many other matters, “the truth lies between.” The tree is rather a shy bearer,

but deserves a place in every garden; where, if trained to an east or west wall, and the branches kept at good distances apart, the fruit will ripen well.

6. *Large White Genoa, or Marseilles Fig.*—Ripens along with the preceding. This is supposed to be one of the first figs introduced into this country; and is still in existence where, probably, it was originally planted, viz. in the archbishop's palace at Lambeth.

The fruit are large, much swollen towards the eye, though tapering to the stalk, which is short and thick. The colour yellowish-white; skin thin; pulp of a reddish cast throughout, melting, and very well flavoured.

This is another excellent sort for potting, and easily kept progressing to perfect (as the fig tree is intended to do by nature) both its crops. For this purpose it only requires the protection of a greenhouse during the winter, where but little artificial heat is necessary. It is moreover an excellent bearer.

7. *Large Blue, or Purple Fig.*—Ripens towards the end of August. This is one of our best figs. The fruit are large, of a long regular shape; the colour dark-brownish purple, covered, in fine seasons, with a fine bloom; the pulp is red, rich, and finely flavoured. It is also a prolific bearer, either under glass or in the open air. In the house, trained to a trellis or kept in boxes, or in the open garden as dwarfs or standards, it always yields plentifully. The

author has received nine shillings per dozen for his crop from under glass, and almost as much for his fruit from the open wall, from the Margate fruiterers.

Some of the properties of this variety have been, by a late writer, transferred to the Brunswick fig; properties which the latter does not deserve. The mistake is alluded to here, to guard young gardeners or purchasers from disappointment.

Miller, in the fourth edition of his Dictionary, just mentions the "long purple fig;" though Whitmill (an eminent gardener of his day, and to whom Miller owed much for his early knowledge of gardening), in his list or book, published in 1726, calls it "Whitmill's Early Purple:" but which was neither more nor less than the "long purple" of Miller. This little bit of vanity in Whitmill—to gain a sale for his trees, or a little celebrity to his name—has been too much practised by many who were by nature his juniors, and professionally by far his inferiors.

The blue, or long purple fig, is valuable on another account; it bears carriage well, being firm in texture, and not apt to crack. As the leaves are large, and not much indented, it should be laid in, in pretty open order, to admit sun and air. The laterals should always be carefully preserved, as they are the principal bearers.

8. *Black Genoa Fig*.—Ripens about the end of August. It was introduced by Miller; and, though a fine rich fruit, does not seem to have been much

noticed until the duke of Dorset, about 1772, received plants of this variety from abroad, which were planted at Knole Park, in Kent, under the name of the *Black Italian Ischia*. At Knole, the kind gained a new character; and from thence plants and cuttings of it were liberally distributed by his Grace; one of which came under the care of the author, who cultivated it, both on a south wall, and afterwards in a house, which, though not built on purpose for the fig tree, and otherwise but indifferently planned, yet the fig tree in question, being planted in the centre of the trellis, against the back wall, soon occupied the whole length (thirty-six feet) of the house; and succeeded, as to fruitfulness and health, uncommonly well, producing as fine crops as could be wished for. Fire-heat was but cautiously employed, and never too early in the season. Nothing in the shape of actual dung was ever bestowed on the border; but manured water very frequently, when the tree was thought to need it.

9. *Lee's Perpetual-Bearing Fig*.—No date need be assigned for the ripening of this variety, because, if cultivated as it should be—that is in pots, under glass—it yields fruit nearly all the year round.

The author was supplied with a plant of this sort, from the worthy Mr. Lee himself, and from all he saw of it, under his own management, concluded that it well deserves the character given of it. The fruit is in shape and size similar to the early white Marseilles. The colour dark brown: pulp light red, sweet and pleasant to the taste. It has all the appearance of a

good bearer ; and, no doubt, will do well on a south wall, where there is no convenience of hot-houses.

The foregoing nine varieties of the cultivated fig, are the only ones really worth the British grower's attention. The author can vouch for their excellence, having proved them all under various modes of management, and in different soils and situations. He could have swelled the list by mentioning sorts which he has heard of, but with which he is not so intimately acquainted as to warrant his approval of them, though he does not deny but that some of them may have merit. The white Turkey is one which he might have included ; it is that which is dried and imported into this country in such great quantities. But this is very like the white Genoa, above described, and, if any thing, an inferior fruit. The only remarkable difference is in the form of the leaves ; these being very deeply indented, like those of the Brunswick : to which, however, it is also inferior in quality.

It is hardly necessary to repeat the caution before given, respecting the care required in gathering the ripe fruit : as no fruit are more liable to injury from rough handling than the fig.

In conclusion, let it be observed, that much of the success attending fig culture, depends on the nature of the subsoil, where the trees are planted. If not perfectly free from superfluous moisture, the trees will neither grow moderately nor bear well.

SECT. X.

OF THE FILBERT AND NUT.

The filbert is no doubt an improved variety of the common wild hazel. The Italians call the fruit *Avellana*, and the French *Avellane*; from a district in the former country, where great quantities of filberts are grown, and from whence the nuts are supplied to the surrounding nations, amounting in value to above eleven thousand pounds sterling per annum. These filbert plantations in the south of Europe, and the Maidstone plantations in England, are the most considerable sources whence the supply of this favourite kernel are drawn for the markets.

Though filberts and other varieties of the hazel have been long cultivated in Britain, it is more than probable they came to us through Holland. The Dutch have gone before us in many branches of gardening; and in the working and management of the filbert, they certainly excel. Now, however, we are nearly on a par; except perhaps in their frame management of fruit trees, which they content themselves with, rather than go to the expense of hot-houses.

Kent is the most noted county in England for the cultivation of the filbert, as the hundreds of acres round Maidstone can testify. It is quite a branch of rural economy in that quarter, and it is believed much to the advantage of the cultivators.

The varieties of the filbert are as follow, *viz.*

1. *Red Filbert*.—So called from the kernel being covered with a red film, and from the leaves being of a reddish green, especially when fading. The quality of the kernel is superior to that of any other; and though not so good a bearer as the white variety, yet, if planted in light hazelly loam, not too much enriched with dung, it will be found productive of good crops.

2. *White Filbert*.—Is nearly equal to the red in flavour, and much superior in prolificacy. In favourable seasons this variety has been known to yield above twenty hundred weight per acre; though an average crop is calculated to be about half that quantity.

The soil in which this sort thrives so well about Maidstone, is rather a strong hazel loam on a dry gravelly subsoil. Dung is seldom applied; as it is found to cause the trees to grow too luxuriantly, and checks their fruitfulness.

3. *Frizzled Filbert*.—So called from its small indented leaves round the nut. It is a prolific bearer; but not distinguished for any superiority of flavour, &c.

4. *Large Cob or Barcelona Nut*.—This was first introduced into English gardens, by the celebrated John Ray, author of the “History of Plants,” 1665. Previous to that time they used to be imported from Spain under the name of Barcelona, a far better title than that of cob.

In Swinburn’s “Travels in Spain,” we are in-

formed that sixty thousand bushels are sometimes collected, and shipped from Barcelona in one season: and that this vast quantity is produced from one wood or plantation in the interior of the country. This variety, however, is not a great bearer in this country, owing perhaps to its being placed in too rich a soil.

5. *Cosford Nut*.—This is a superior variety of the hazel, supposed to have been first raised by a Miss Young. The shell is thin, and the kernel is exceedingly well flavoured; it is moreover a very good bearer.

The above are all the varieties which the author thinks worth enumerating. In some recently published catalogues, there are above a score of others named, but none of these are even equal to the above described standard sorts; and particularly if pruned and treated according to the following rules.

It may be matter of wonder, but so it happens, that the generality of gardeners know little or nothing about pruning filbert trees. The art has never been studied either by masters or men; and it is remarkable, that this branch of the pruner's art should have been brought to perfection by the untaught, unlettered Kentish peasant—without books—without master, save experience—without mistress, save Nature herself! It is curious too, that this art has been engrossed by the labourers in the central parts of the county, and without its being followed in other parts of the kingdom. The know-

ledge seems to have descended from father to son for generations, and a very useful portion of rustic knowledge it is. Here the author begs to observe, how much more valuable is the knowledge which has been gained by the mere dint of practical experience, compared with that emanating from theoretical writers, who bury what they really know of practical matters beneath a load of hard names and learned quotations, which only serve to puzzle rather than inform the reader. So much of this kind of writing is now extant, that, though read over and over again, and even committed to memory, the reader would not be so wise during his whole life (especially as respects the pruning of the filbert) as a visit to Maidstone would make him in one hour.

The principle of the Maidstone pruners appears to be this : to check and control the natural growth, and thereby bring forth the fruit-bearing principle in greater force and energy. After training the tree to a dwarfed habit, they allow it to expend its strength in no other way than in the production of flowers and fruit. The filbert is naturally only a shrub, or small tree, and the cultivator makes it still less for his convenience, in pruning and gathering the fruit. That style of pruning, which is found the best for the currant, is also the best for the filbert.

The young plants which are chosen by the Maidstone growers are such as have been raised from layers, and which have been lined or bedded out in the nursery for two or three years. Each plant should have one strong upright shoot, of not less

than three feet in height, this being necessary in order to the future form of the head ; and this, early in the spring, after the trees have been put out in their final stations, is cut down to about eighteen inches from the ground. This height will admit of a clear stem of twelve inches below, and which part must be at first and ever afterwards kept free from shoots, as well as suckers from the root. This deprivation of shoots and suckers will cause the buds left at the top to push with greater vigour. If eight strong shoots be produced in the first summer, they must be carefully preserved, as that number is required to form the head ; but if less than this number come forth, then two or three of the strongest (or the whole if necessary) must be shortened back to half their length at the next pruning, in order to obtain the requisite number.

The sufficient number of branches being obtained, if not in the first, certainly after the second pruning, they are to be carefully preserved and trained outwards and upwards ; at first nearly horizontal, but curving gradually upward at the point. The easiest mode of doing this is by using a hoop of the proper size placed within the shoots, and to which the latter are tied in star-like order, and at equal twelve-inch distances. Such a laterally curving position may be much assisted and caused by a careful pruner, always cutting at an *outside* bud, which, when grown sufficiently far outwards, naturally turn up to form the permanent branches.

The points of the branches are allowed to rise to

the height of six feet, but never higher; and the middle of the tree is always kept free from shoots and branches, so that a well-trained head resembles a large bowl.

The subsequent management of the trees, both while gaining the desired form, and after having gained it, consists in preserving all the short spurs which will be produced on the branches, and cutting away or shortening the laterals which every year rise from the same. The management of these laterals is of great consequence. If they exceed the length of six inches, they may be cut back to a few buds; but if less, they should be preserved, as their points are generally fruitful. The grand object with the pruner is to have the branches thickly beset with fruitful spurs, and which are only reduced in length, when after a few years' growth they become too distant from the branch, when they are cut back to a healthy spur behind. If any part of the branch becomes accidentally naked, a strong shoot from the bottom may be led up, and managed so as to fill up the vacancy.

When filbert trees are thus managed, and have arrived at their full volume in width and height, they may be kept in the same state for many years — say twenty or thirty, — by the knife only, and with the requisite skill in using it.

The plantations in Kent are either in single rows, or in entire quarters or fields. The plants are put in at eight or ten feet distances, more or less, according to the quality of the soil. Six hundred and

eighty plants are required for an acre, at eight feet distances every way: at ten feet distances, four hundred and thirty-five; and at twelve feet distances, three hundred and two trees will be required.

The Kentish pruners, who, as observed before, are neither botanists nor physiologists, are notwithstanding well aware of the use of the male catkins, rejoicing to see them in great quantity, and carefully preserving them. From the greater or lesser number of the catkins, they usually predict what share of crop will follow.

The practical example set us by the Maidstone pruners confirms two very essential principles in the art of gardening, *viz.* that by counteracting the natural tendencies of a plant, it may be dwarfed, and by thus dwarfing, making it more fruitful. The filbert tree is so constituted, that it is ever extending itself by throwing up a multiplicity of suckers, which exhaust the bearing branches and render them sterile; but denying the plant its tendency to increase itself by suckers, promotes its energy to increase itself by seeds.

Filberts intended for long keeping should remain on the tree till they are thoroughly ripe, which is easily known by their rich brown colour. They should be laid on a dry floor for a few days, and afterwards stored in jars of dry sand, where they will keep sound for a great length of time.

SECT. XI.

OF THE GOOSEBERRY.

The gooseberry is a native of Britain ; and none of her native fruits (except perhaps the plum) has been more improved by culture than this. In its wild state it is a small, rough, tasteless berry ; but under cultivation has been brought to high flavour, and great magnitude.

Besides its uses as a table and kitchen fruit, it is when half ripe, capable of yielding a juice, which after fermentation, and a little necessary compounding, forms a liquor resembling (if not sold for) “sparkling champagne,” much superior to the common wine made of the ripe fruit.

Miller, in his Dictionary, published in 1743, mentions only six or seven sorts, but admits that many more varieties raised from seed were in existence at that time. Indeed, from information received by the author in Cheshire, he has every reason to believe that gooseberry shows were held in that or the neighbouring county as early as the date of the Dictionary alluded to.

Previous to describing what are now considered the leading sorts, a few observations may be offered respecting the culture of the gooseberry.

The best soil is a fine fresh loam, neither too heavy nor too light, eighteen inches or more in depth, and if resting on a subsoil of clay so much the better.

Dunging every second or third year is necessary ; but it should be considered, that giving it in excess, though it encourages the growth of the tree, and enlarges the size of the fruit, it deteriorates the flavour.

Gooseberry trees, when planted in rows, should not be less than six feet apart. When planted in quarters, the distance is optional. An open situation should always be chosen ; for if under the shade of trees, the fruit are never so high-flavoured.

Gooseberries, like the currant, may be forwarded by having places on walls of different aspects, as well for expediting their ripening, as for the convenience of covering the fruit from birds and weather. Low paling is sometimes used for the culture of this fruit, and which answers extremely well ; as the flowers can be easily guarded in early spring, and the fruit in autumn.

If young bearing plants are potted, after being established for one year they may be forced successfully in a moderate heat. Like other potted fruit trees, they require frequent supplies of manured water.

The gooseberry often suffers from the depredations of two or three insects, which breed and live upon the trees. The best preventive is the wash recommended at the end of the article "Peaches ;" to which the reader is referred. This liquid should be sprinkled over the trees morning and evening, till the caterpillars disappear. After the sprinkling, the surface of the ground under the trees should be

stirred up, and covered with a thin layer of soot; and at the same time dusting the trees all over with fine slacked lime. These applications will go far, not only to banish, but to keep away every species of insect that preys on the gooseberry. The author has great faith in the efficacy of the offensive scent of soot, in keeping off insects from this and all other fruit trees.

The following list of gooseberries is arranged in classes, according to colour, under the names of the persons who raised or first brought them into notice, and also under their popular names. Such arrangement is worth following in nursery catalogues.

Gooseberries continue in use for about the space of three months; and the times of ripening are indicated by the terms *early*, *late*, and *latest*.

Red Gooseberries.

1. *Adams's Cheshire Sheriff*.—Early.—Fruit middle size, nearly round, downy; skin thin, containing pulp of a peculiarly tart yet pleasant flavour. It is a good bearer; and as the growth is of a dangling character, the branches require support.

In pruning gooseberry trees of this drooping character, care should be taken to shorten the leaders to a bud rising, or promising to rise, from the upper surface of the shoot. This attention, repeated at every pruning, will give the tree a loftier habit, and raise it from the ground.

2. *Alcock's King*.—Late.—Fruit large; colour

deep red: rough but thin skin; shape oval; pulp sweet and rich. It forms an upright tree; and the fruit is esteemed in the dessert.

3. *Alcock's Duke of York*.—Early.—Fruit middle size, not so deep a red as the above, nor not so rough. In other qualities (except the growth, which is more spreading) it is much the same. It is a good fruit, and not liable to crack in wet weather.

4. *Ashton's Globe*.—Late.—A large, handsome fruit, of a bright red colour; skin smooth, but rather thick; pulp very sweet, and keeps well on the tree after it is ripe. The growth is spreading, and its loaded branches require support. The second thinning of this variety are as good for bottling as either the Rombullion or white Dutch.

5. *Aston's Warrington Red*.—Latest.—No other gooseberry hitherto raised in England has made better returns to the planter than this. It is of first-rate quality, a great bearer, and hangs longer on the tree than any other; often being had in perfection in the end of October when properly protected. The fruit is large, oval, rough, not so pulpy as some others, but of a rich flavour. It is a spreading grower, but may be trained more uprightly by careful pruning.

6. *Berry's Farmer's Glory*.—Late.—Fruit large, oval; skin thin, and nearly smooth; pulp rich; an abundant bearer, and well worth cultivation. Growth very rambling; and requires much attention when young, to give it good form.

7. *Boardman's Prince Regent*. — Late. — A fine large fruit, nearly round; skin smooth and thin; pulp finely flavoured. Growth spreading, the branches requiring support.

This is a prize gooseberry, and often “bore away the bell;” gaining above a hundred prizes in the first year of its appearance at the shows, and had no competitor for several years afterwards.

As this is the first *prize gooseberry* we have come to, it may not be amiss to describe the mode of culture pursued by those growers who may intend showing their fruit. In the first place, the sort is fixed on: the tree is taken up, and planted in a very rich spot of loamy ground, where it is allowed to establish itself, and be favoured and nursed in every possible way. It is kept thin of wood, and suffered to bear but a few fruit.

In the year of the show, the tree is particularly attended to; watered with soft or manured water, and shaded from the hot sun. The crop is thinned at three different times, reducing the numbers at last to a very few, which appear to take the lead in swelling off. By this management the few fruit left to come to perfection swell to an unusual size; and, being carried to the show, are weighed against those from other growers with which they have to compete, the heaviest carrying away the prize. Some of the sort just described have been found to weigh *twenty-two* pennyweights!

8. *Broad's Emperor*. — Late. — Fruit large, ovalar,

dark colour; skin rough and thin; pulp pleasant; the growth spreading, and a good bearer.

9. *Benson's Farmer's Glory*.—Late.—A fine large fruit, somewhat oval; colour light; skin thin, and nearly smooth; pulp rich and pleasant. A good dessert fruit. The growth is irregular, spreading, and requires support. The fruit are liable to crack in wet weather, its only fault.

10. *Brundit's Atlas*.—Latest. — This was a very large fruit when first raised, on which account it received its distinctive title. The fruit is oblong; skin thick and rough; growth erect; and makes a near approach to the properties of the Warrington.

11. *Brotherton's Huntsman*.—Late. — One of the first-rate prize gooseberries, having gained one hundred and forty-one in the third and fourth years it was exhibited. The fruit are large and globular; the skin thick and rough; pulp rich. Forms a fine upright bush; but requires support, and a covering in wet weather.

12. *Capper's Top Sawyer*.—Late. — A fine, large, prize gooseberry, having gained many prizes. The berry is nearly round; skin pale red, rough but thin; pulp rich. The growth is drooping, and, when bearing, requires support.

13. *Champagne*.—Early. — For fine flavour this old variety is surpassed by none. The fruit are middle sized, oval, pale-red at first, but afterwards deeper the longer they hang on the tree; skin rough but thin; growth upright, and suitable for

training against a north wall, for the purpose of prolonging them in use for the table. This was the favourite gooseberry of his majesty George III.

14. *Chadwick's Sportsman*.—Late.—This is a second-rate prize gooseberry, and as such won many prizes in the third and fourth years after it came out. It is a large elongated fruit, the skin thin and smooth, pulp good; growth erect, but bends under its load of fruit, and therefore requires support.

15. *Early Rough Red*.—One of our oldest varieties, and known in the time of Switzer, previous to Miller. It is a small, round, rough fruit; having a very thin skin, and very rich pulp. It has always been esteemed as a dessert fruit, and preferred to many of the larger and more showy varieties, even by the most refined tastes. It is an excellent bearer, and forms a fine spreading tree.

16. *Farmer's Roaring Lion*.—Latest.—This is one of the very largest gooseberries. It has won more prizes than perhaps any other—altogether above eight hundred! The berries are oblong, smooth; pulp of thick consistence. It is a good bearer, having drooping branches which require support. The gooseberry fanciers use two sorts of props for keeping the bearing branches of their trees in due position: hooked sticks stuck in the ground for keeping branches down; and crutched or forked sticks placed under to keep them up.

17. *Fox's Royal Scarlet*.—Early.—A beautiful coloured, middle sized, oval fruit; the skin is smooth

and thin, the pulp rich and pleasant. It is a good bearer, and forms a fine tree for espalier training.

18. *Gerrard's Achilles*.—Late.—The fruit is large, oval, and rough; the pulp is very good, and the berries have a long-keeping property, for which the kind is desirable in every collection.

This variety won a prize at Altringham, in Cheshire, at which the author was present in 1778. So much was it prized, that Mr. Maddock, of Warrington (afterwards an eminent florist at Walworth, near London) purchased the whole stock. It is one of the best keeping gooseberries; almost equal to the Warrington.

19. *Gregory's Nonsuch*.—Early.—Rather misnamed, but will be found a very good fruit. It is large, nearly round; skin smooth and thick; flavour not rich, though pleasant. The growth spreading, and a good bearer.

20. *Hamlet's Beauty of England*.—Late.—This is certainly one of the many of this description. The fruit are large and oval; the skin rough and thin; pulp well-flavoured, and fit for the dessert. It forms a fine spreading bush, and is a good bearer.

21. *Ironmonger*.—Early.—This is so called from the dingy colour of the fruit. It is an old inhabitant of our gardens, which is the best proof of its excellence. The fruit is round and smooth, and pleasantly acid. It should be gathered for the dessert before it is quite ripe; and in its early state furnishes the first

supplies for tarts and bottling. It forms a spreading tree, and seldom fails in bearing.

22. *Keen's Seedling*.—Early.—An excellent newly raised sort, by the person whose name it bears, one of the first market gardeners in the vicinity of London. The fruit is middle sized, longer than round; skin thick and rough; pulp rich and agreeable, partaking of the properties of the Warrington red, and should have similar culture. It is an excellent sort for the market gardener.

23. *Leigh's Rifleman*.—Latest.—This is a large nearly round fruit; skin rough and thin; pulp high-flavoured, and fit for the dessert. It is a prolific bearer, and comes pretty near to the Warrington. It forms a fine upright bush like the Champagne, and therefore suitable for training on walls or espaliers.

24. *Lomax's Victory*.—Late.—A good old prize gooseberry, well worth cultivation. The fruit are large, nearly round, skin rough, but not thick: pulp pleasantly acid. The crop keeps well on the tree, and bears wet weather without injury.

25. *Mathews' Alexander*.—Latest.—This is another good old sort. The fruit are large, skin rough and thick; not very juicy, but very rich flavour; and continues long in season. It is a dangling grower, and often needs propping.

26. *Melling's Crown Bob*.—Late.—This is a famous prize sort, and has been very successful in competition. It is an oblong large fruit, with a thick rough skin; the pulp good, though somewhat acid. To make the most of the crop, it should be

thinned for tarts or bottling ; for which purpose it is much approved. It forms a spreading bush, and often requires support as well as care in pruning.

27. *Neil's Red Rose*.—Early.—This, with other sorts hereafter named, was raised by a gardener of that name, who lived with a Mr. Blackburn, near Warrington, in Lancashire. A fine collection of exotics was Neil's chief charge ; the other branches of gardening being, in that place, only a secondary concern. But besides growing exotics in very great perfection, Mr. Neil had leisure to raise a few new gooseberries, of which the red rose is one. The fruit are small and round, skin very smooth and thin, pulp very rich, and much admired by the nicest palates. This variety has also been called the small red globe, but they are identical.

28. *Red Crystal*.—Early.—This is a very old variety, fruit about the middle size, perfectly round, the skin very smooth and almost transparent, and pulp very sweet. It is an excellent bearer ; forming a handsome tree of nearly erect growth.

29. *Speechley's Yaxley Hero*.—Late.—The fruit are large, nearly oval ; the skin rough, yet thin, containing a fine rich pulp. As a prize berry it is one of the best, a good bearer, and forms a handsome bush.

30. *Tillotson's Seedling*.—Latest.—This has a modest name, but it has greater merit than many with high-sounding titles. It is in every respect like the Warrington, so that the description of the latter will do very well for the former.

31. *Ward's Richmond Hill*.—Late.—This variety has received its name from the celebrated place where it was raised. The fruit are large, oval, with a rough thick skin, containing a grateful pulp. The tree has spreading branches, is a good bearer; the fruit hanging long on the tree. It should be in every collection.

32. *Wilmot's Early Red*.—This variety is chiefly valued for its earliness; being one of the first that comes in for culinary purposes; on which account it is particularly eligible for market gardeners. It having been raised and recommended by one of the first fruit growers about London, is a sufficient guarantee of its goodness.

White Varieties.

33. *Beaumont's Smiling Beauty*.—Early.—This is a prize fruit, consequently large; shape oblong, having a smooth thin skin, and pulp of very good quality. It should be gathered before it is over-ripe, as it cannot bear wet weather. The tree is a rambling grower, and often requires support.

34. *Belmont*.—Early.—This is a valuable old sort, of the middle size, round and smooth; the skin is thin, and contains a peculiarly sweet pulp. The tree grows compactly upright, and is a good bearer.

35. *Capper's Bonny Lass*.—Late.—This is a variety which has won many prizes, and has been a profitable one to the person who raised it. The fruit are large, oblong, and rough; the skin thick,

containing pulp of a middling quality. The bush is spreading: the size of the fruit is its only recommendation.

36. *Crystal*.—Late.—This is an old favourite, and not excelled by any of its colour. The fruit are small, round, and smooth, and when green are preferred for bottling.

37. *Holt's Beauty*.—Early.—A very handsome, round, smooth berry, of the middle size, and of good flavour. It is a good bearer, and forms a handsome bush.

38. *Kenyon's Noble*.—Late.—A fine large fruit of an oval shape, nearly smooth, pulp good, and prolific bearer, hanging long on the tree, and not much affected by changes of the weather. The growth is upright.

39. *Neil's White Rose*.—Early.—This is another raised by Mr. Blackburn's gardener, and, except the colour, very like his red rose, already mentioned. The growth of this is also more spreading.

40. *Neil's Miss Bold*.—Early.—Another variety, which probably originated in the same quarter with the preceding. The author has seen it cultivated in great perfection, by a cousin of the late Mr. Aiton, of Kew, at that time in Cheshire. The growth is upright, and being a great bearer, and late, deserves a place in every collection.

41. *Peer's Royal Charlotte*.—Late.—A very excellent prize fruit, not very large, but good. The fruit are oval, rough, skin thin, containing a rich pulp: growth rather upright, and a good bearer.

42. *Princess Royal*. — Early — This gooseberry much resembles the last, but is much larger: it is oval, rough, and has a superior flavour. The growth is pendulous.

43. *Saunders' Cheshire Lass*. — Earliest — This is a famous-prize variety. The fruit are large, oblong, and nearly smooth; the pulp very rich, and much admired in the dessert. The growth is upright, and altogether one of the best prize gooseberries.

44. *Stringer's Maid of the Mill*. — Late. — This is another excellent prize fruit, and fit for every purpose of the cook and confectioner. The growth is erect, and very suitable for training in any way.

45. *Taylor's Bright Venus*. — Early and late. — The fruit is middle size, oval, having a rough thin skin. The quality is really good, and deserves cultivation, the growth being regularly upright.

46. *Wellington's Glory*. — Early. — This fruit is of a noble size, and has a high character. It has gained many prizes, and has been much cultivated. The fruit are globular, the skin thin for so large a fruit; and has the other properties of prolificacy and upright growth, being very suitable for espalier training.

47. *White Dutch*. — Late. — A very old and very excellent sort, much in request for preserving green, and also for the dessert when ripe. The fruit are of the middle size, round and smooth: a great bearer, and next to the Rombullion for preserving, and for the purposes of the London Champagne manufacturers.

48. *Woodward's Whitesmith*. — Early. — This stands next in estimation to the *Wellington*: the fruit are nearly round, smooth, and russet-coloured next the sun. The tree is prolific, grows uprightly, and should be in every collection.

Yellow Varieties.

49. *Amber*. — Early. — This is very similar in quality, and fit for every purpose of the white Dutch, and may be very properly called “a family fruit.” There is another gooseberry very like this, that was many years ago cultivated, under the name of *Hunt's Prince*, but they differed very little. Hunt was an early and intimate friend of the great Miller, and probably was a man of some note as a gardener.

50. *Brotherton's Sovereign*. — Late. — A fine large prize berry, of an oval shape, with a rough thick skin, but containing a fine rich pulp. It forms a spreading tree, and particularly suitable for training as an espalier.

51. *Hardcastle's Gunner*. — Late — A prize berry of the first quality; large, long oval shape: skin rough and thick, containing an agreeably flavoured pulp. The growth is spreading, and requires support to have the fruit in perfection.

52. *Jackson's Golden Drop*. — Very early. — Few kinds have had a better run than the golden drop. In both stages of its growth it is a profitable kind, either for the cook or confectioner. For the latter purpose it should not be allowed to get too ripe,

otherwise it loses its flavour. The fruit are small, round, and smooth. The tree grows compactly upright, and is an excellent sort for forcing.

53. *Prophet's Rockwood*. — Early. — This fine fruit needs no further recommendation than the report that it has gained 777 prizes in the course of five years. The fruit are large, round, slightly rough, and high flavoured. The growth is upright, and by timely thinning the fruit and supporting the branches, the former come to fine perfection.

54. *Rombullion*. — Late. — A very old variety, which has taken the lead in markets, as the best for preserving. The fruit are small, round, and smooth: the tree is hardy, takes a good form, and is very durable, provided the soil is not too light.

Of yellow-coloured gooseberries it has been affirmed, that they are generally higher flavoured than those of other colours; but it is a rule having no good foundation; many others, both red and green, are equally rich, as every one acquainted with the fruit must be aware.

Green Varieties.

55. *Allen's Glory of Radcliff*. — Late. — The fruit are middle-sized, oval, and smooth; pulp rich, for which it is esteemed one of the best for the dessert.

56. *Berry's Greenwood*. — Late. — This was a prize berry, and very successful at first, but has since fallen off in size. The fruit are large, oval, and almost smooth. The tree is a good bearer, with spreading branches, often better for support.

57. *Early Rough Green*. — Early. — This is one

of the oldest and greatest favourites of its tribe. For earliness in ripening and high flavour it has scarcely an equal. The fruit are small, in consequence of their great numbers, round, and with a very thin skin. The growth rather spreading; and is an excellent sort for the cottage or market garden.

58. *Massey's Heart of Oak*. — Early. — A prize berry, not very large but very good, of an oblong shape and smooth. The shoots are much curved, which requires attention both in pruning and propping when laden with fruit. It is quite suitable for the dessert.

59. *Nixson's Green Myrtle*. — Late. — This fruit has been long in cultivation; the author having met with it in Nixson's nursery at Knutsford above fifty years ago. It still continues in estimation as a very good fruit.

60. *Parkinson's Laurel*. — Late. — This is also a prize variety, similar in style to the Heart of Oak. The fruit are of a longish shape, slightly rough, pulp very sweet, and admired in the dessert. It forms a compact upright bush, and is a good bearer.

61. *Peer's Queen Charlotte*. — Early. — This fruit is full the middle size, oblong shape, and rough; the skin is thin, and the pulp of good quality. The tree is of upright growth.

62. *Pitmaston Green Gage*. — Late. — This variety is said to have been raised by I. Williams, Esq., proprietor of the place whence it is named. That gentleman's approval of it is a sufficient guarantee that it should be in every collection.

63. *Walnut Green*.—Late.—An old sort, but still regarded for its real worth. The fruit are middle-sized, somewhat oval; skin rather thick, but contains a very good rich pulp. It is equal to the best in bearing, and forms a spreading tree.

64. *Wainman's Ocean*.—Early.—This variety is mentioned more for its large size, and the many prizes it has won, than for any intrinsic value it possesses. To those, however, who admire very large gooseberries, they cannot choose a better than this. They may be improved in flavour by being planted in a dry soil; but in that case the berries would not be so large.

The foregoing list of gooseberries comprises all the best which the author has had in cultivation; and which, in his own humble opinion, are as many in number, and as good in quality, as need be chosen to form a collection; whence supplies may be drawn, throughout the gooseberry season, for every purpose for which this small fruit is useful.

The mode of pruning the gooseberry tree is nearly the same as that advised for the currant, only the branches are kept in more open order; and when the whole crop is intended to be gathered green, the bushes should be left very full of branches. The soil, situation, &c., has already been adverted to at the head of the catalogue.

SECT. XII.

GRAPE.

The great importance of this fruit, as being one of the richest gifts of nature to man, must be the author's excuse for being more diffuse in his account of the history and culture of this queen of fruits than otherwise might be thought necessary; but he will endeavour to be as brief as possible, more especially as he begins to find his manuscript swelling under his hand to a much greater extent than he either anticipated or intended.

The cultivation of the vine seems to have been coeval with man, in his first state of civilization. The use and abuse of its precious juice appears to have been known even in Noah's time: and no doubt the plant followed the footsteps of man into every region and climate where the plant could succeed. The warmer parts of the temperate zone are the natural climate of the vine, or upon the elevated parts of tropical countries, where the sun's heat is mitigated by the height of the mountains above the level of the sea.

That the vine was gradually brought from the southern to the northern parts of Europe, is a very natural transition. Whether it was brought into England by the Romans, is not perhaps certain; but we are well assured, that, as soon as this country

came under the ecclesiastical government of the Pope of Rome, and when that powerful potentate established colonies of Italian monks in various parts of these kingdoms, that they introduced, for their own personal gratification, every species of their own native fruit and vegetables which had any chance of succeeding in Britain. Among the rest, the vine was not forgotten. This was not only planted against the walls which surrounded the monasteries; but considerable portions of the most suitable land belonging to them were planted and inclosed as vineyards, for the production of fruit only. Some of these inclosures remain to this day, though the vines have long ago been rooted out. That vineyards were planted by, and in possession of, laymen in those days, is also evident, from examination of some tithe-rolls belonging to ecclesiastical establishments, in which the tithes of wine or grapes are particularly mentioned.

Now although we are informed that vineyards were planted and yielded fruit in great quantities in those early times, we need not suppose that the grapes were fully ripe. Excellent wine can be made from unripe fruit, and might very well suffice for the cloistered monks, as well as for our own hardy barons, before commerce had opened to them the wine vaults of the continent.

But that vineyards may and have succeeded in our own times, is beyond a doubt: that at Painshill, planted by Mr. Hamilton, answered well; he selling, in some years, hundreds of pounds worth of wine!

But the culture of the vine, for wine making, is no longer either a necessary or a profitable pursuit in this country. The vineyards of France and Spain and Portugal furnish us with the best wines, far cheaper than we can manufacture them for ourselves. This, among other causes, has operated to discourage the culture of the vine in the open air in Britain; and has confined it to the walls of gardens and nurseries, to the walls of dwelling-houses, and to forcing-houses built for the purpose.

In such situations the treatment of the vine has arrived at the greatest perfection, especially since the publication of the excellent works of Kennedy and Speechley on this fruit tree. It is remarkable, that Justice makes no mention of vine-forcing in his very useful work published in 1732; so that it would appear vine-forcing was not then introduced into England, though it must have been very shortly afterwards.

Experience has perfected the system of grape culture to such a degree of certainty, that it is hardly possible for any practitioner to fail, if he only attends to what is herein set down for his information. And, first, concerning the different modes of propagation: this is either by layers, cuttings, or by single buds.

Layers are expeditiously made into young trees, and fit to be planted out for good in the course of one season. The shoots to be layered, are either led through or bent down into pots of rich earth, where they readily strike root; and are fit to be sepa-

rated from the mother plant in the autumn, and transported in safety to purchasers, or to places where they may be wanted.

Cuttings are made of short-jointed, well-ripened young wood, about a foot more or less long. A quantity of these are potted singly, or two or three together in the same pot; and usually plunged in a moderate hot-bed, where they readily strike root, and, by after-care in re-potting, are reared up to be transplantable.

Raising young vines from eyes was first practised by Kennedy, and afterwards by Speechley. A single bud, with an inch of wood on each side of it, is pressed into the surface of a small pot of good earth, and covered all but the point of the bud, and placed in heat. Roots are produced by the wood; the bud shoots upwards, and becomes the stem of the young tree; which is shifted from one pot to another, and from one hot-bed to another, till they are saleable plants.

Next of the soil.—The vine, like all other fruit-trees, grows most luxuriantly in rich deep soil. In that it has large shoots, leaves, and perhaps a few large bunches; but the shoots and fruit ripen late, if they ripen at all, and the fruit will be very insipid. In opposite circumstances these results are reversed. In a shallow light soil, the growth is moderate; the shoots are small, though not weak; the bunches numerous, well ripened, and of high flavour. The shoots or young wood are also thoroughly hardened, having prominent buds, and break with vigour and

high health in the following year. It is also well known, that the roots of the vine, in order to have healthy moderate-sized shoots and high-flavoured fruit, require a horizontal range more or less extensive; deriving, it seems, much benefit from the influence of the air and heat of the sun when near the surface.

If these observations are facts, it is matter of wonder to see what some authors have advised respecting the formation of vine borders. Vast accumulations of the richest soils and manures are mixed together, as if for the gross-feeding drum-head cabbage, rather than for the delicate-feeding and abstemious grape vine; which, in its native habitation, is content to climb upon and subsist by what it can draw from the interstices of the naked rock.

Many mistakes having been made, and many erroneous ideas having been circulated, respecting the formation of vine borders, it is highly necessary, in this place, for the author to declare what his own conclusions are on the subject.

In the first place, it is absolutely necessary that the bottom of a vine border be dry, and, if possible, hard as well as dry. If the subsoil be clayey, it should not be dug into to give depth, because such excavation is apt to become a receptacle for water, unless this be prevented by efficient drainage. If a vine border must needs be made on such a subsoil, it is better to raise the border by bringing upon it an additional quantity of proper soil, than gaining depth by breaking into the natural subsoil, where

there is the least risk of being annoyed by superfluous water.

The vine delights in a dry, porous soil. Fresh light hazel loam, mixed with lime rubbish, leaf-mould, and a small portion of well-decayed old hot-bed dung, will be found as suitable a compost as can be used. Road sand, that is, the scrapings of the public roads, is an excellent ingredient in the composition of a vine border; and where the whole soil of a garden is heavy, that is, strong loam or clay, the best application for its amelioration is road sand; rendering it fit for vines, or any other tree or crop.

The author has observed the vine to prosper exceedingly even in pretty strong loams resting on brick-earth (a kind of sandy clay). In the fine soils of this description about Brompton, Fulham, and Hammersmith, as fine crops of grapes are produced on walls, in the open air, as need be desired. It is true, that the vines in those places are particularly well trained and managed; but the author is confident the same results would follow anywhere else, under the same circumstances of soil and management.

There is, in fact, no description of soil but what may be made fit for the culture of the vine; indeed, from what we see of it crammed up in any corner of a paved court-yard, or stuck in among gravel, pitching, or brick-bats, it may be averred of this tree, that it is the least fastidious of any other in its choice of soil, provided it be sufficiently porous and dry. Under a surface bed of gravel we know it does well; and as to the depth of soil for the spread of the roots,

twelve inches is far better than twelve hundred. Shallow planting, it may be repeated, is the grand secret, and forming the border so as to induce the horizontal range of the roots, rather than inviting them downwards, away from air and sun heat, which they cannot well do without.

As the roots of the vine should be kept as near the surface as possible, it follows, that they should not be subjected to be wounded by the spade, or robbed by deep-rooting surface crops. A mulching of exhausted stable dung, laid and kept on in dry weather, and forked in occasionally, is all the manuring required by this tree.

Training the Vine.

Of all other fruit trees, the vine is the most tractable. The certainty with which it may be made to break at any place, and the pliability of the young shoots, enables the trainer to give it what form he pleases. There are three principal modes of pruning the vine, *viz.* the horizontal or fan form, which is only suitable for single trees ; the spur method ; and the upright style of training.

The first is that plan of training adopted for the great vine at Hampton Court ; which, when the principal leaders are formed, have their laterals every year cut down to from three to six eyes, by which method great crops are produced.

The second, or spurring-in method, is selecting principal leaders for every rafter in a house, or at about two feet distances apart on the open wall.

These principals ever remain in the same place ; and are so treated as to put forth lateral shoots, alternating with each other, right and left, at about twelve-inch distances, along the whole length from bottom to top of the wall or rafter. These laterals bear the fruit, which, as soon as they have shown, are stopped at the joint next beyond the uppermost bunch. This stopping is performed with the finger and thumb as soon as the bunches have fairly appeared. By this stopping, the whole strength of the tree is thrown into the fruit, which consequently arrives at great weight and perfection. When the crop is gathered, and when the leaves have fallen, these laterals are cut back to one or two buds, which in the same way, and with similar treatment, produce the crop of the next season, and so on for as long as the branches are fruitful, and the spurs do not get inconveniently long ; and, when this happens, the branches are wholly cut away, to be succeeded by young ones trained up in their place.

The third plan of pruning and training is the upright, and which is the best suited for open walls of considerable length. Such will require a number of plants, put in at four or five feet distances, the side shoots from which, will very soon fill up the intermediate vacant spaces. From the trees, the whole face of the wall is in a few years covered with branches, but of three different lengths. The oldest branch has reached the top of the wall, and bears its fruit on the *upper third* of its length. This branch at pruning time is entirely cut out to make room for

a young bottom shoot to be trained up in its place. The next oldest branch bears fruit on the second or *middle third* of its length, and gains the top of the wall at the same time. The next branch rose from the bottom in the last year, and bears its fruit on the *lower third* of the height of the wall. Thus it may be perceived, that every three adjacent branches are of three different lengths when pruned; each occupying different heights on the wall, and regularly succeeding each other in height, and as the highest are cut out, succeeded by young ones from below.

A wall covered by trees, planted so closely together, can always be depended upon for a supply of strong shoots from below; and the author has found it better than either Kennedy's or Speechley's methods of using fewer trees, and making them meet, to furnish the wall, by training horizontally two of the first branches, from which upright shoots are afterwards trained up.

The author knows some vines trained in this way in the Brompton Park Nursery, that were probably planted by Loudon and Wise: showing how tenacious of life the root of the grape vine is.

The best time for pruning the vine is in the autumn, as soon as the growth ceases. Leaving this work till February, is not at all judicious.

The different modes of training described above, may be practised in vineries. In pine stoves, the long branch spurred (one only being under each rafter) is most convenient. But there is another mode of pruning often practised: that is, by long

shoots succeeding each other from the bottom. While the shoot of last year is yielding its fruit in this, a successor is trained from the bottom to take its place, and yield the fruit of the next.

It has been the fashion ever since the time of Quintynaie, to give figures of trained trees to convey better ideas of the methods recommended. Some of these are truly fanciful and ridiculous, because impracticable. It is much easier to make a beautifully symmetrical tree upon paper, than upon a wall or espalier; but pretty pictures are pleasing to some people, and if it makes them wiser, so far well.

The vine is subject to the attack of a few insects. The most pernicious is the red spider, or acarus; and which can only be kept off by frequently washing the leaves with the engine or syringe. Dry air encourages this pest more than any thing; and, therefore, steaming and watering before the fruit begin to ripen, is the only remedy. But should they be unconquerable by these means, recourse must be had to the wash hereafter to be recommended.

The large scaly insect, or vine fretter, is only seen in dry vineries; they are best got rid of by brushing them off, as soon as their white bag of young appear, bursting the shell. And if, at the pruning season, the branches be anointed with a decoction of tobacco, in which sulphur and a little camphor is infused, applied with a hard brush, this will go far to banish the insect entirely.

Wasps and flies devour many bunches of grapes. Phials half filled with sugared water, destroy a great

many of these insects; and, later in the season, bagging the bunches in white paper or gauze is a good expedient for their preservation. The gleanings of the crop, which are in danger from frost, may be cut from the trees and tied to a line stretched across an airy room; in which state they may be kept for a month longer than they could be in the open air.

The grapes described in the following pages are select sorts, and are arranged in three classes; *viz.* first, such as will ripen in the open air; secondly, such as require some assistance from glass; and, lastly, those which cannot be ripened in this country without the assistance of both glass and fire heat.

Early or Hardy Grapes.

1. *White Sweet Water*.—This favourite grape has been known to ripen in the last week of August on the open wall; but the bunches are seldom handsome (unless the weather at the flowering season has been very favourable), many of the berries being imperfect. The berries are middle-sized, round, and of a pale-green colour; the skin is thin and transparent; the juice abundant and agreeable. The tree is a good bearer; and though it arrives at a passable ripeness in the open air, it is greatly superior under glass.

This grape is in great estimation, and is extensively cultivated in Holland; whence it was probably brought by Sir William Temple, about 1660. One very simple method of ripening the sweet water

in Holland, and which has been and is practised with success in this country also, is by the use of a common melon-frame placed in front of a healthy vine, about two or three feet from the wall. The ground within the frame is covered with slates or tiles to reflect the sun's heat. A trellis is fixed within and over the area of the frame at about six inches from the glass. The branches of the vine are loosened from the wall, laid down on and fixed regularly upon the trellis, notches being cut in the back of the frame to receive the stem. The lights are then put on, covered with mats or tilted, as circumstances require; by which means the fruit are ripe a month or two sooner than those in the open air: they are also better in quality.

2. *New Sweet Water*.—Similar in qualities to the last, but with berries of more equal size. This has gone by the name of “Stilward's Sweet Water,” and also the “Large French White;” but which name it really deserves, the author cannot say, further than that he is quite convinced it is different from the one first described. There are several other sweet water grapes mentioned in the Horticultural Society's Catalogue, and in those of others; but which has been uncivilly sneered at, as originating in “whim or caprice.”

3. *Esperione*. — A very excellent early grape, better known by the name of “Turner's Early Black,” from the circumstance of his having, when living in Bond Street, a number of cuttings to dispose of at a high price. It had been in the hands of

others, before this sale of cuttings; but however or by whomsoever it was introduced, it is an acquisition of much value to the English gardener.

The fruit are large and round, of a deep-purplish black colour, and covered with a fine bloom; the skin rather thick, but inclosing a fine juicy pulp. It is prolific, and sometimes ripens as soon as the sweet water.

It should be observed, in pruning this vine, to cut the laterals down to the third or fourth bud, from which there will be a better chance of having fruit than if either lower or higher.

4. *Early Black Cluster*.—So called from the compactness of the bunches; and by older authorities the black Burgundy, it being the grape from which the famous Burgundy wine is made. The bunches are numerous, berries small, closely set together, and somewhat oval; colour deep black; juice plentiful and sweet. Leaves dark green, with a wrinkled surface.

5. *Burgundy, or Miller Grape*.—The last name from the mealy hue of the leaves, and which conspicuously distinguishes it from the black cluster. Its style of growth, bearing, size, and form of the bunches, is much like the preceding; but the quality of the fruit is superior, being of a richer flavour.

Both these grapes are worthy of a good wall, particularly the latter, which ripens its berries more equally than the former. It has been said, by a late writer, that this grape was raised by Miller: the

fact is, the grape was known a hundred years before his time.

6. *White Muscadine*.—Called by the French “*chasselas musque* ;” a well known and useful grape, introduced by that great promoter of British gardening, Sir W. Temple, who was ambassador to the courts of the Low Countries in the reign of Charles II and other succeeding sovereigns. Sir William, together with Lord Capel, at Kew, introduced a great variety of fruit trees from the Continent in their days ; particularly French and Flemish pears and other fruits, which were planted in their respective gardens at Moor Park, Kew, and Sheen, near Richmond, as reported by Switzer.

The bunches of this variety are of a moderate size, rather loose and long ; berries round, light-green, with a little russet on the side exposed to the sun ; the pulp pretty firm and juicy ; not so high-flavoured as the royal muscadine, but valuable for its early ripening, and hanging long uninjured on the tree. It is also one of the best for potting, and for early forcing along with the sweet water. In Langley’s Pomona, it is said to ripen in the open air about the end of August ; but it is never so early now-a-days.

7. *Royal Muscadine*.—Speechley has unnecessarily added *d’Arboise* to the name, which would signify that there is another royal muscadine, which is not the fact.

The fruit and bunches are distinguished from the

last by being *shouldered*, the berries growing closer together, so as to require the thinning-scissars; and, when ripe, of a rich amber colour, with a higher flavoured juice.

The growth of both trees is much alike; but this is a more tender tree in every respect. It is one of the best for the vinery; and, if chosen for the pinery, it should have the coolest place. On the open wall it should have a warm aspect.

Parkinson, describing a muscadine grape, which some suppose to have been this, states, that the bunches sometimes weighed six pounds in the open air; but no such weighty bunches are produced now, even in our best vineries: half the weight are considered full size; and bunches of a pound each are as large as need be either wished for or expected.

8. *Black Muscadine*.—Is a variety brought from France, where it is called *chasselas noir*. The berries are oval, rather loose on the bunch; colour black; skin rather thick; and pulp not of the first quality, but very passable. The tree requires a dry, warm situation, in order to assist ripening the fruit; but even if ever so favourably situate, it will not be found so good a bearer as the two last.

Two or three other sorts are reported of, as being early ripeners, and fit for the open wall; but of their merits the writer has had no direct proof from experience, and therefore omits naming on mere hearsay evidence.

Varieties requiring more or less artificial heat.

9. *Black Hamburgh*. — Is a grape, which, from its excellence and prolificacy, has found its way into every collection. The bunches vary in size and weight, according to the crop and mode of training, from one to four pounds; but seldom the latter, except on the alternate long-shoot method of management. The bunches are shouldered; berries slightly oval, and of a good size; colour, when well ripened, nearly black, and covered with a fine bloom. The pulp is rather firm and grateful to the taste, the juice being vinous and plentiful. The tree is one of the best bearers, consequently profitable to the growers; and, when cultivated in a house which only protects it from frost, the fruit will hang on the tree, if required, until Christmas.

This grape, with another nearly as good, was introduced into this country, by a Hamburgh merchant of the name of Warner, about the beginning of the last century; and which has been such a boon to this country, that the introducer's memory should have been perpetuated by calling the grape by his name. But it has chanced otherwise, no doubt unintentionally.

It is scarcely possible to write of this grape, without adverting to the famous tree of this sort at Hampton Court. Its history has been so often before the public, that it is unnecessary to take up the time of the reader with it here. Suffice it to observe, that it extends and fills nearly two hundred feet of

vinery, and has been known to ripen two thousand bunches, of a pound weight each, in one season ! When this vine is planted in a house, the front wall should be on arches, in order that the roots may have scope to extend in all directions. It succeeds under any style or method of training ; and altogether is one of the most useful varieties of its kind.

10. *Red Hamburgh*. — This was introduced with the foregoing, and received its name from Miller. It is sometimes called the *Gibraltar*, it being common in that fortress. Except colour, there is but very little difference between the red and black : the berries of the former are, perhaps, a little more globular, and there is an opinion that it is not so sure a bearer. The red is much cultivated in Guernsey and Jersey in pots, and, when in fruit, are brought in considerable quantities to Southampton market for sale. This is mentioned to show, that grapes may be grown in pots with much more facility and certainty than many British practitioners are aware of.

11. *Black Frontigniac*. — This is called by the French the *Muscat noir* ; the epithet Muscat being given to all grapes having a musk-like flavour. Frontigniac, or Frontinans, is a town in France, where a peculiarly high-flavoured wine is manufactured, as well as that called Constantia. The latter is also made at the Cape of Good Hope, but chiefly from the Muscat of Alexandria grape.

The branches and berries of the black Frontigniac are small, the latter growing closely together, and

require thinning before they ripen. The skin is thin, the pulp substantial, and of a peculiarly high and rich musky flavour. The tree is an abundant bearer; and, as the growth is not luxuriant, the spur method of pruning is suitable. This is one of Sir William Temple's introduction, and in some favourable seasons has been known to acquire considerable perfection on the open wall, as well as on layers of the same year. A light sandy loam is the best soil for this and all the other kinds of Muscat grapes, in order to have their high flavour in perfection.

12. *White Frontigniac*. — This variety in all respects is much like the preceding, except in the colour, and some little difference in the size of the berries, those of this kind being somewhat larger. The bunches, like the other, require thinning to prevent the central ones rotting. The skin is thin, covered with a whitish dust or bloom; the pulp extremely rich, and of as high a musky flavour as the black. This is regarded by many as a superior fruit, and one of the best in cultivation.

13. *Grizzly Frontigniac*. — Seems to be a union of qualities, habit, and form, as well as of the colours of the other two; its principal use in collections being to add variety in the dessert.

14. *Red Frontigniac*. — This variety is said by some pretending judges to be superior to the others of its name, but the writer never could discover that it is really so. The bunches are in shape similar to those of the white, and not so closely set as those of the grizzly. Colour, dark red; skin rather thick;

other qualities of pulp and flavour much like the preceding.

15. *Black Prince*. — A good serviceable grape, and though of long standing in this country, and supposed originally from Spain, was not generally noticed until it was observed growing in great perfection at Sir A. Pyches', at Streatham, by Mr. Malcolm, an eminent nurseryman, late of Stockwell. Being propagated in the nursery, it was soon after sold under the name of Malcolm's Black Prince.

The bunches are long, with loosely set berries, which are large and oval; the colour, when well ripened, are deep purple or black; the skin rather thick, and covered with fine bloom. The pulp and juice are not of first-rate quality, but far from inferiority. The tree is a good bearer, and ripens with a very moderate degree of artificial heat. As this grape is sometimes planted on a south wall, it should have every assistance from the pruner, by being trained in very open order; and when the fruit are ripening, a partial thinning of the leaves should be made, as they obstruct too much of the sun's light and heat, and prevent the fruit from receiving the full benefit of the sun's agency.

Speechley has no Black Prince in his list; but his black Portugal will be found to be the same; as is also that black grape found at Cambridge, which has been described as distinct.

16. *Giles's Seedling*. — This grape was raised from a seed of the black Hamburgh, by a Mr. Giles, foreman in the nursery of Mr. Russel of Lewisham.

It partakes of some of the properties of its parent, and is certainly well worth cultivation. It ripens early in the stove, and no doubt would succeed well in a milder temperature. It has one valuable property, *viz.* that of hanging long uninjured on the tree.

17. *Frankenthal*. — A good grape, originally from the south of Germany. The bunches and berries are large, the latter oval; colour, nearly black, covered with bloom; the skin is thick, containing a mellow pulp and rich juice. Excepting the Frontignacs, there is no other higher-flavoured grape, and it is well fitted for the warmest part of a vinery, or the coldest end of a stove. It hangs a good while on the tree after it is ripe.

18. *Red Muscat of Alexandria or Jerusalem*. — This is a fine rich grape, very little inferior to the white. The bunches are long and well shouldered; berries, large and oval; colour, light red; the skin thick, containing a fleshy pulp and high muscat flavoured juice. Though the berries hang loosely, the bunches are the better for being thinned out. It is mentioned by Bradley that this grape ripens on open walls at Paris: the author has attempted it at Southampton, but failed, and remains convinced, that it is only in a vinery or stove that this grape can be had in perfection. This, like all other fruit, is much higher-flavoured grown on a thin light soil than from one which is rich and deep, whether in or out of a hot-house.

Grapes requiring a high degree of heat.

19. *White Muscat of Lunel*. — The bunches of this fine variety are of moderate size, the berries rather thinly set, large, and oval; colour, dull white; the skin remarkably thin; the pulp mellow, with abundance of vinous juice, and of a slight musky flavour. It requires a high temperature to ripen the fruit thoroughly; but in consequence of its thin skin does not keep long on the tree.

The first time the author saw and partook of this grape was in 1789, when he had the pleasure of visiting the gardens of Welbec, then under the care of the celebrated Mr. Speechley. He (the author) would be unjust to his own feelings did he not, on recollection of that interesting visit, pay a just tribute of respect to the memory of one, from whom he received the greatest attention and civility, and who showed him such a sight as he had never seen before, nor has he since. The large double-pitted pine stove was then completely filled with pine apple plants, and the rafters bore his splendid collection of grape vines, fifty varieties, loaded with fruit. The spectacle was no less beautiful than particularly interesting to the visitor, who wished the opportunity of making a comparison so useful to him in his business and favourite study of fruit culture. No stronger proof could be had of the excellence of the art of gardening, or of the transcendent abilities of the worthy superintendent of the Welbec gardens. No one who has read Speechley's books, but must

have a high opinion of his talents ; but the view of the results of his practice tended materially to confirm every rule he has laid down, and every word of instruction he has written.

The high-keeping, superior style, and condition of the whole gardening department, at Welbec, was no less creditable to Mr. Speechley, than expressive of the munificence of his noble master. The late Duke of Portland spared no expense, in furnishing his gardens at Bulstrode, as well as at Welbec, with the choicest collections of fruits and rare plants, the whole being supported and conducted in the most liberal style. It was this liberal spirit of the duke that called forth the abilities of the servant. Without such liberality no man can shine. And no doubt many such Speechleys would appear, were there such minds and fortunes united to call them forth.

20. *White Muscat of Alexandria*.—This excellent grape has received several names, as Muscat of Jerusalem, Passe musque, &c., which being frequently separated in nurserymen's catalogues, causes much confusion.

The bunches are long, and well shouldered : the berries very large, oval, and grow loosely on the bunches : the colour deep amber : skin not so thick as some other large grapes, and filled with a firm pulp of high musky flavour, though not quite so much so as the white Frontigniac.

As this grape requires a high temperature, a pine stove or vinery adapted to the purpose, are the only places where it will have a chance to succeed. One

great property of this variety, is its long keeping on the tree, hanging sometimes in the stove till the end of November.

A grape called the Tottenham Park Muscat, said to have been raised from the seed of the above, has been going the round of the nurseries lately: but it is questionable whether it be not the very same. Young plants, however, sold well, and so far the new name has been of service.

Some gardeners have complained, that the white Muscat has failed in setting its fruit, and have advised dusting the flowers with the pollen of some other sort as a remedy; but the best remedy for this failure, supposing it to exist, is good management.

21. *Black Constantia*.—Otherwise called the Purple Frontigniac. It is a very rich grape; the bunches are long and regularly formed; the berries middle size, rather closely set, of a deep purple colour, approaching to black. The skin is thin, the pulp juicy, and partakes of the Muscat flavour. The tree is a good bearer, as was evident both at Welbec and Fulham, where trees received from the Cape of Good Hope were planted about the same time.

The quality of this, and all other fruit, is much influenced by the soil on which they grow. The wines made from the grapes produced on the shallow soil of the hills, is invariably found to be superior to that made from the larger fruit of the rich valley. This is the case at the Cape, as well as in all the wine countries of Europe.

22. *Blue or Black Tokay*.—This grape has been

long in this country; and has been grown in great perfection at Dunham Massey and at Welbec. Both bunches and berries are small, rather oval; colour deep purple: skin thin, pulp and juice rich. The berries are ornamented with a fine bloom, to preserve which requires gentle handling. Bradley calls this grape the *Malvoise*, the name adopted for it by Speechley.

23. *Lombardy, or Flame-coloured Tokay*.—This grape, in respect of size and flavour, is a contrast to the last. In size the bunches sometimes weigh seven pounds, whereas the blue Tokay rarely weighs more than as many ounces. Unluckily the quality is inferior; but it is worth a place in every collection on account of its size. The fruit also hang for a month or six weeks on the tree after they are ripe. The bunches are shouldered; berries large, somewhat oval, closely placed together, and require thinning. The colour a pale red; pulp firm, and pretty juicy. It is a good bearer, but only where it has plenty of heat. The tree requires very ample space, as both shoots and leaves are uncommonly large.

24. *Black Damascus*.—This grape was introduced into England by a duke of Norfolk, about the middle of the last century, and has been successfully cultivated at Welbec, Bulstrode, Kew, and nowhere better than at the Grange, in Hampshire, by that accomplished gardener Mr. M'Arthur.

The bunches are middle-sized, the berries large, and when fully ripe, of a deep black colour. The flesh is mellow, juice abundant, and richly flavoured, not surpassed by any other. The berries are unequal

in size, large and small : but the latter should always be thinned out, which will increase the size of the larger. This variety is only fit for the pine stove.

Mr. Speechley grafted this on the Syrian, and it fruited well in a pot. The tree is a vigorous grower, and requires space.

25. *Black St. Peter's*.—This grape is supposed to have been introduced by Sir William Temple into his garden at Sheen. Miller's description of it is correct. The bunches are large and long, with shoulders. The berries are also round, large, and of a deep black colour. The skin is thin : pulp soft and delicate, abounding with juice of a fine vinous flavour. The colour of the juice is red, and this is a test of the genuineness of the sort. The leaves are of a peculiar character, being remarkably jagged. It is a most suitable sort for the pine stove, and continues long in gathering ; and no grape makes a richer show on the table.

26. *West's St. Peter*.—Concerning this grape considerable doubts have arisen, whether it be not identical with the Lombardy. The author has taken some pains to clear away these doubts ; he observes, that the black St. Peter of Miller, and the black Lombardy of Lindley, are positively the same. But the testimony of Mr. Money, respecting West's St. Peter, remains unshaken ; and the author has no doubt but that it is quite a different grape from the Lombardy.

On this case, an instance of the uncertainty of names of many of our best fruits, the author regrets that the Horticultural Society of London did not, at

its first institution, make better arrangements for proving the identity of our grapes, as it has done in respect of other fruits ; more especially as they had, or might have had, the plan of the late Mr. North, as an economical example, as a guide.

27. *White Tokay*.—There are two varieties of this grape, both equally good in point of quality of flavour, but not so in point of bearing ; the one here described being preferable.

The bunches and berries are of the middle size, the latter greenish white, and oval-shaped : pulp tender and juicy, and of superior quality. The fruit ripen well in a vinery ; but in the stove they become a perfect sweetmeat.

The other Tokay alluded to, was many years ago cultivated at the Earl of Stamford's, in Cheshire, under the name of the “ Charlsworth Tokay.” It resembles the white, but has a thicker skin and paler colour. Which of the two is the genuine Tokay of Speechley, is not decided : the one he himself cultivated at Welbec, was certainly a very rich fruit ; and which the author saw there in full bearing, along with two other curious varieties, *viz.* the cornichon (little horn), bearing long crooked berries ; and the Aleppo, or leopard grape, having berries partly white and black.

28. *Syrian*.—No grape has made more noise in the gardening world than the Syrian ; not because of its excellence as a fruit, for in this respect it is the least valuable of any, but for the enormous size of its bunches.

The famous bunch, weighing near twenty pounds, produced on a tree at Welbec, in the year 1781, by Speechley, produced also a great sensation and call for this kind of vine. Everybody having a pine stove must also have a Syrian grape; and in many places the bunches are often brought to the weight of from seven to ten pounds. It has also been found, that by giving up the aim of large bunches, the qualities of the fruit may be greatly improved; that is, by planting the tree in a very shallow, dry, sandy soil. This treatment raises the flavour of the grapes to nearly that of the white Muscadine.

The bunches are of a regular shape, having large projecting shoulders, which require to be tied up, to allow the berries in the centre to swell and ripen with the rest. The berries are large, oval, and of a greenish white colour; skin thick, pulp firmish but not very juicy; flavour very mild, unless very highly ripened. The tree is of vigorous growth, and requires thin pruning, and plenty of room in the hottest end of the house.

Having described the above twenty-eight different sorts of grapes, and which are grouped according to their fitness for the open wall, the vinery, and for the pine stove; the writer now proceeds to append some general observations, which may be serviceable to the cultivator of this highly-prized fruit.

Vines may be safely transplanted when twelve or fifteen years old; only requiring care to be taken in

preserving as many of the roots as possible, and re-planting in suitable soil, laying out the roots in a proper horizontal position, and by no means too deep. Such trees, carefully removed, may bear a good crop in the second year, and go on prosperously afterwards.

The most suitable compost for vines may be made as follows : *viz.*—To half a cart load of good fresh loam add one quarter of a load of old, well-consumed, stable dung, and one quarter of a load of lime (not brick) rubbish, if to be had ; if not, the same proportion of light-coloured sand with a little more exhausted dung. These materials well incorporated, and prepared a month or two before wanted, will be found in every respect proper for the vine ; and if laid on a naked rock or bed of gravel, or other impenetrable substratum, to the depth of from fifteen to twenty inches, the trees will succeed far better than if planted in deep rich compost, fit only for the grosser-feeding plants. The vine border should also be of good breadth, to allow the roots to extend as far outwards as they may be inclined to do.

In the progress of forcing a vinery, one point of good management should not be forgotten ; and that is, to keep the under side of the leaves frequently syringed, and the air within the house duly moist, from the time the fruit are set till they begin to ripen ; and in the early stage of forcing, should the aphid appear on the shoots, fumigation must be had recourse to.

The foregoing list of grape vines contains but few

in number, compared with those enumerated in some modern catalogues; but as the author only wished to recommend those which from long experience he knew best worthy of cultivation, he does not fear that omitting new sorts, whose merits have not yet been fairly established, will be considered a defect in his book.

Speechley, in speaking of his Welbec collection, consisting of seventy sorts, declared, that one-third of the number were amply sufficient for every purpose of a large domestic establishment; and that that number would comprise every quality and property found in the family of the grape vine.

SECT. XIII.

MEDLAR.

The medlar has been long cultivated in this kingdom as an inferior fruit, though some persons prefer it to those of a more luscious character; more especially after the pulp is in a state of decay, it being too austere before this change takes place. There are only two sorts.

1. *The Nottingham Medlar.*—This variety rises to be a middle-sized tree. The fruit are rather small, but pulpy for its size; and after becoming mature in the fruit room, where it requires to be laid up for a few weeks, is considered superior in flavour to the Dutch variety.

2. *Large Dutch Medlar*.—This fruit is twice the size of the preceding, and is more generally cultivated. It is a low, crooked-growing tree, and generally very prolific. It is nearly as valuable in the shrubbery for its large ornamental flowers, as it is in the garden for its fruit: still it has its admirers, when, like the other, it is ameliorated by keeping.

Abercrombie, it seems, advised, that neither the medlar nor quince should be planted in orchards, lest it should adulterate the pear and apple blossoms. This, though a needless precaution, has been noticed with approbation by some subsequent writers, but with little reason; because, though the seeds did receive a stain from the medlar (which might happen) or the quince (which could not happen, as they blow too late), the impregnated seeds not being used, could not convey any kind of adulteration. The idea is truly whimsical, as no one can rationally conceive that the qualities of the growing fruit could be altered by the reception of strange pollen from a neighbouring tree.

The medlar is generally propagated by grafting on the common pear stock. The stocks are trained standard-high; and, when strong enough to bear a graft, are worked; or, if there be any worked pears of standard-height, not wanted for sale, they do well to work medlars upon. To get the medlar to form a good head, shortening the shoots for a year or two with the knife is necessary, minding to encourage the most upright growths. But after the head is

formed pruning must cease, because the flowers are terminal.

The fruit should remain on the tree as long as possible; and, when gathered, be laid in a heap on the fruit-room floor, there to become mellow and fit for use. Should the fruit be wanted before they ripen naturally, let moist bran be mixed in the heap with them: this accelerates the ripening, but spoils the flavour.

SECT. XIV.

MELON.

The melon, which forms a principal part of the food of the lower orders in the south of Europe, requires artificial assistance in this country; and forms a very principal part, together with the cucumber, of the gardener's business. The varieties are out of number; but there are a few standard sorts which deserve particular attention, and which will be selected from a great crowd of inferior kinds lately brought into notice. English varieties are often inferior, in consequence of being too often grown in the same place, mixed together, or in the near neighbourhood of cucumbers, gourds, pumpkins, &c., whence no pure seed can be expected. In the old school of gardening, the greatest attention was paid to keeping each sort apart, particularly the rock cantaloupe, which, from such care,

has been kept pretty true: but many sorts have degenerated; and it may be mentioned as a fact, that, notwithstanding many other sorts of fruit have been improved, no appreciable improvement has been made in the melon family for the last sixty years.

Within these few years, several new varieties have been introduced from Persia; none large, but many small, with thin rinds, and partaking of the shape of the green-flesh variety—a superior fruit, and raised with one half the trouble of any of the Persians. Neither are these last considered so wholesome as such as the firm-fleshed rock melon, being much too succulent.

1. *Early Cantaloupe*.—This excellent little melon was brought from Portugal about the beginning of the last century, by the Honourable Dormer Stanhope; and is the same as Miller describes as the Portugal or pocket melon. Another, introduced about the same time, was called the Galloway, which answers to the Zatte of Miller; but the first acquired preference.

The early cantaloupe is nearly round; colour yellowish green; rind smooth, and very slightly ribbed; the pulp orange-coloured, firm, and, when well and not too early ripened, a very pleasant fruit. It is a prolific bearer, generally setting its first show of fruit kindly; of which, if three or four go on swelling of an equal size, it is a good sign. When these first are cut, leaving the plants healthy, they, if pruned back and refreshed with a little good soil,

will produce a second crop equal, if not exceeding the first.

The soil, for melons of this description, need not be so rich and heavy as for the larger sorts. One half of rich cucumber earth mixed with another half of good fresh loam, not over stiff, will answer well. The loam should have been turned several times before being mixed with the other, and on no account to be sifted, either for the hills or for the general earthing up. If loam cannot be conveniently had, kitchen garden soil, not too poor, will answer the purpose. Loam, however, whenever it can be employed, ought to be considered as the basis of all composts, whether for melons or any other plant. The writer will not venture to say that such a compost will do for the Persian varieties, not having cultivated any of them himself. Their fruit he has seen and eaten, and found them very sweet and luscious; but from their being no bigger than a goose egg, and very troublesome to cultivate, suspects they, as a useful fruit, will soon be laid on the shelf.

2. *Romana*. — So called from that part of Italy where it is much cultivated, and from whence it was brought to this country many years ago. There are two varieties of this sort, the round and the oval, both very good.

The size varies in weight according to cultivation, say from one to four pounds. The rind is smooth, of a yellowish-green colour, which changes but little

in ripening, and therefore requires watching and cutting on the first appearance of a crack at the stalk. Both sorts are but slightly ribbed; the flesh is firm, and of fine flavour; and, taking it altogether, it is one of the best of melons.

It is above sixty years since the writer first cultivated this melon, having at that time received seeds from an old gardener of the name of Drew, then in the service of Earl Fitzwilliam, at Richmond. Drew had cultivated the Romana for twenty years previously; and the writer has not observed the least degeneration of the sort in all this long period. It is to show that any variety of the melon may be kept true by care, that this circumstance is related. There is also the netted Romana, a very good sort, sometimes called the netted cantaloupe, which is wrong, that being a very different fruit.

3. *Scarlet Flesh Rock Cantaloupe*.—Few melons have been held in higher estimation than this, and few have had more prizes awarded than there have been to this. The fruit are middle-sized; average weight about three pounds; the rind rough, but only moderately warted; shape nearly round, and not deeply furrowed; colour, mottled-green and yellow; flesh melting, rich, and of a fine scarlet colour. It is an early and prolific bearer. Two or three of the most promising fruit on each plant only should be allowed to swell off, and much attention is required to keep up a regular bottom heat, for which M'Phail's pigeon-hole pits are well designed. It must be observed, that this melon requires rather

more care in the cultivation than some other sorts. This has frightened some young practitioners out of a good opinion of it; but a little close attention to the growth of the plants, when they begin to run, will overcome all fancied difficulties attending it.

Having alluded to melon feasts, recalls to the mind of the writer many feats and friends of by-gone days, when youthful ardour and hope banished every care and lightened all his toils. Readily could he recount, even at this late period of his life, what occurred at those feasts — who were the fortunate competitors — and which of his companions shared with him the honours of a prize. Such recollections are often a solace to his own mind; but he fears a detail of them would be felt irksome to the reader, and therefore shall only add, that these feasts, when partaken of within the bounds of moderation, were productive of much active emulation amongst young men, diffused a knowledge of gardening at a time when there were no cheap periodicals to instruct, nor penny-trumpets to sound tidings of improvements and new discoveries in the business. These meetings were also bonds of union, and promotive of good fellowship among the brethren of the spade.

There is a variety of the scarlet-flesh melon with a smooth rind, which is highly spoken of, and has been grown in great perfection, and gained a prize, by Mr. Stanar, now foreman of the melon ground at Windsor Castle.

4. *Orange Cantaloupe*. — A charming little melon, also called the Golden Cantaloupe. The fruit are

small, being under two pounds, round and slightly furrowed. The colour, when ripe, is yellow: rind rather thick, and generally covered with a little russety netting; pulp, tinged with red, is firm, and of exceeding good flavour. Seeds of this variety were sent from the south of France to Sir Philip Stephens, by whom they were given to the author and others. It is a good bearer, but better adapted for a late than an early crop. If cut before it is fully ripe, it may be kept for a considerable time, first in a cool and afterwards in a warmer place, to prepare it for the table. By such means it may be kept good till the end of October.

5. *True Coral Succade*.—This was received at the same time and from the same gentleman with the above. In outward appearance it differs from every other sort. The fruit are under the middle size; perfectly round; the rind thin, and covered with a fine velvety down; colour deep olive; flesh firm, of a light scarlet colour, very juicy, and richly flavoured. It is a good bearer, setting its fruit early and in abundance. One fruit to each runner is as many as should be allowed to ripen.

6. *Green Flesh*.—Shape nearly round: rind rather thick; colour greenish white; flesh a light green, melting, full of juice, which is sweet and luscious, a predominating quality in all green-fleshed melons.

7. *Green Flesh*.—Shape oblong, rind thin and of a brownish white colour. The pulp is of a deeper green, but partakes of all the good qualities of the preceding.

8. *Netted Green Flesh.* — The only difference between this and the last is the netted appearance of its exterior, and having deeper furrows.

Green-fleshed melons were known in Miller's time, but they fell into disrepute, from the idea that the softness of their pulp caused flatulency. This prejudice appears at present to be wearing off, from the high encomiums bestowed on the Persian varieties, which are nearly allied to the sorts just mentioned.

The above three varieties are all prolific, and set their fruit early and freely. Two good plants should be allowed to ripen two or three fruit on each; that is, four or six under each light. They require but little water at the root when near ripening, and better it is to allow an extra depth of mould than that the plants should require water, which deteriorates their flavour. The fruit should be used the same day they are cut, as they soon spoil in the fruit room.

9. *Black Rock Cantaloupe* — The name of black rock is given to this melon from its skin being covered with large black tubercles, resembling broken granite. Cantaloupe is a specific name, to signify not only whence the sort was obtained, but also the shape, all cantaloupes being depressed, that is, the longitudinal diameter is less than the transverse.

No melon is more extensively cultivated than this. Its noble size and rich appearance in the dessert gains it admittance into every garden. The fruit sometimes grow to the weight of fifteen pounds! but those weighing from six to ten pounds are the

common weight. The ground colour of the fruit is green, variegated with blotches and large wart-like swellings, becoming partially yellow when ripe. The flesh is firm, orange-coloured, juicy, and replete with an agreeable vinous flavour.

Rock melons are hardy and fruitful. The plants are usually stopped at the first or second joint, this causes the production of runners; these are trained outwards till they reach the sides of the frame, when they are also stopped: this second stopping causes the production of lateral bearers from the joints behind, and which soon show and set fruit. The fruit intended to ripen should receive regulation; those of the same degree of forwardness, and equally disposed over the runners, should be preferred, and care taken that no one fruit gets the start of the others.

The cultivation of rock melons should be on a more ample scale than for the more diminutive growers; larger frames and beds; a thicker covering of stronger compost, together with, at all times, a lively bottom heat.

There are many accounts of enormous sized melons being occasionally raised, especially from newly imported seeds. These, like the snake melon grown by the writer, five and a half feet long, can only be valued as curiosities. The varieties which we already have in cultivation, are surely sufficient for every useful purpose. The object of the cultivator ought to be, the best qualities united with moderate

size ; for no magnitude can compensate for the want of high flavour and wholesomeness.

10. *Silver Rock Cantaloupe*.—So called to distinguish it from the black. In quality it is equal, in shape somewhat different, being less depressed, and less furrowed ; in weight much less, averaging five pounds : requiring less space, and consequently fitter for early work.

There is another variety called the golden rock, which is much and successfully cultivated in Holland. The Dutch gardeners excel in the culture of the melon, their frames and pits being on a large scale ; and they contrive to keep up a uniform bottom heat, so indispensable to this fruit. But they have not been able to keep either their fine varieties or their art at home. Many in this country have imitated the Dutch practice with the utmost success. Wells, foreman of the melon ground in the royal garden at Richmond, and Thorn, foreman to a market gardener near Kew (both men that could neither read nor write), were both noted for their superior knowledge of the culture of melons. Under oiled paper frames (so urgently recommended by Miller a hundred years ago), Thorn raised immense crops, much to his own credit, and advantage of his employer.

The author witnessed Thorn's mode of culture ; and as it may be practised by many who are ignorant of its practicability, some brief account of it may not be unacceptable. Long hot-beds of prepared dung

are made three feet thick, and four feet wide, and immediately covered with the common soil of the garden, which happened to be a light loam. When the mould on the bed is thoroughly warmed, single plants are put in along the centre, three and a half feet apart, and the oiled paper frames put on. Water and air are given as may be necessary. Each plant is destined to produce one fruit only ; and which, as soon as fairly set, is placed on a brick, and the plant at the same time is stripped of all other runners, and the greater number of its leaves ; and this for the purpose of throwing the whole vigour of the roots into the fruit. All this had been done, and had succeeded as intended : and in the third week of August the author saw with admiration, between sixty and seventy fine rock melons, of from five to seven pounds weight each ! At that time the paper lights were off ; and this to retard and harden the fruit for carriage to market, the manager fearing no rain or change of weather. The seeds to raise plants for these paper frames are sowed in a hot-bed about the beginning of April ; a good season for sowing all kinds of rock melons, in whatever way the plants are treated afterwards.

These two instances of the great abilities of uneducated men, to which may be added that of Mr. President Knight's gardener at Downton, shows the great value of experience in all practical matters. The writer cannot undervalue education ; he has often envied the good fortune of his Scottish brethren in this respect, and the great advantage it is to every

man who has his way to work through the world. But he fears that Latin and Greek will be of no use to the man who must “earn his bread by the sweat of his brow.” How bitterly did poor Switzer lament his fate, in being obliged to handle the scythe, and spade, and wheelbarrow ! which if he had known nothing of Horace and Virgil, would have been to him no misfortune at all.

But to return to the subject.—There is a large melon called the *Honfleur*, imported in great quantities from France, where they are cultivated by the farmers, and which may be introduced to the advantage of market gardeners round London. Notwithstanding all our boasted improvements of late years, horticulture has not yet arrived at full perfection ; and many fruits, which are supposed unattainable without a warmer sky, may yet be matured in this country with but very little artificial assistance.

Melons are subject to canker ; this disease is caused by too much moisture and want of heat. Soon as it appears (if not too late in the season) fresh linings should be applied ; and if the earth in the bed has become too moist, part of it may be removed and replaced with fresh dry compost : the cankered parts should be pruned off.

The melon plant is liable to the attack of the red spider. This insect can only live and increase in dry air ; therefore, keeping the air in the frame in a fine steamy state, and frequently sprinkling with water, will keep down the plague. Or if it be feared

that too much moisture would injure the plants, placing pans, containing a small quantity of flour of sulphur, under each light, will go far to banish the insect.

In conclusion it may be added, that, in the Gardener's Magazine, Mr. Harrison has described a method of raising young melon plants from cuttings of the points of the leaders or laterals, which he asserts are very early fruitful, and answer full as well as seedlings. The idea is feasible; but as the writer has not tried the plan himself, he cannot speak of it from experience.

SECT. XV.

MULBERRY.

This is so old and well known a fruit in this country, that it needs no particular description: one species only is cultivated for the fruit, namely, the black. It is a very long-lived tree; some now standing have been known, as appears from old deeds, for three hundred years!

The tree thrives best in a soft kindly loam of good depth, and on a sand or gravelly subsoil. The trees are usually trained as standards in the nursery after being raised from layers. Sometimes trained as dwarfs for walls in the northern part of the island. The fruitfulness of the tree depends very much on the warmth of the weather at the time it is in

flower, and on the accident of both male and female flowers coming forth at the same time. Sometimes the male catkins drop before the females are expanded, in which case no fruit can follow.

The trees are best planted on a velvety piece of turf, provided the soil is suitable; because the best fruit are apt to drop, and if on turf are not lost. Standard trees require no pruning after they are out of the nurseryman's hands; and dwarfs on walls never bear well till they are very ugly wall trees; that is, till they are covered with long, projecting spurs.

The mulberry is remarkable for its late leafing, seldom green before the twentieth of May; and also for another circumstance, *viz.* it is seldom or never preyed on by insects, except the leaves be gathered on purpose by the hand of man.

SECT. XVI.

NECTARINE.

This is one of the most delicious of our wall fruits; and so very nearly allied to the peach, that they are often found on the same tree. In fact, the French and many other gardeners still call them *smooth* peaches. The treatment and culture of both are exactly alike, and will be fully treated of in the descriptions of one or other.

1. *Fairchild's Early N.* — Ripe about the be-

ginning of August. The leaves are slightly serrated; flowers large and open; fruit small, and nearly round; of a beautiful scarlet on the exposed side, and yellow behind. The pulp is melting, yellowish, juicy, and of rich flavour. It is a good bearer, and eligible for early forcing.

Nectarines in general can bear a higher degree of heat than peaches. Of course, in planting a house with both, the nectarines have the warmest stations; and those of the same sort, in different temperatures, yield the largest and best fruit in the warmest places.

This tree produces an unusual number of spur-like shoots, thickly set with flower buds. If these be wanted, they must not be shortened, as the leading buds can only be depended on for a next year's shoot; and they may be allowed to bear a fruit or two, which will come to perfection because there is a leading shoot. If such shoots be not wanted, remove them entirely; as they are not worth preserving, if there be a good choice of stronger shoots.

The best stock for working the nectarine upon, is the pear plum; and as this is the first time this stock has been named, it may as well be described in this place, as it will be frequently adverted to hereafter.

The pear plum is so called from the shape of its fruit, which is altogether useless as a fruit; but the tree makes an excellent stock for several kinds of our tender fruits. These are raised from layers,

and are high priced to those who use them, and which necessarily enhances the price of the trees worked upon them.

The Fairchild's nectarine was raised by a person of that name near London, who belonged to the first rank of horticulturists. He was one among many others who formed the famous club of practical gardeners in his day; and to which club Miller was appointed secretary, previous to his promotion to the Botanic Garden at Chelsea. This secretaryship, and the notice taken of him by Sir Hans Sloane, laid the foundation of his after-fame.

N. B.—In speaking of the pulp of peaches and nectarines, the term *melting* is used to signify that it quits or parts freely from the stone; and in contradistinction to those called *pavies*, whose pulp adheres to the stone.

2. *Elruge N.*—Ripe about the middle of August. The leaves are slightly serrated; the flowers small; fruit middle-sized, rather oval. The colour dark red on the sun side, light yellow on the other; pulp melting, and richly flavoured. The tree grows healthily, and in general keeps pretty clean of insects and mildew. For forcing, it is one of the best in cultivation. The proper stock for this nectarine is the muscle plum.

In passing it may just be noticed, that there has been lately a new sort of elruge brought into notice, under the name of Miller's elruge, with doubly serrated leaves, a sort which probably Miller never saw: for, in the first place, Miller never noticed

either leaves or flowers in his descriptions of these fruits; and, next, it was not in the catalogue of his most intimate friend, Grey of Fulham. The writer therefore concludes, that it is the old favourite with a new name.

3. *Violet Hative N.*—Ripe about the beginning of September. This name is given by the French gardeners, to distinguish it from their Brugnon violet, a *pavie* which they prize as we do the Newington.

The leaves of this nectarine are somewhat serrate; the flowers small; the fruit middle size, rather oval; the colour next the sun a dark red or purple. The pulp is melting, red at the stone, rich and finely flavoured. The tree is healthy, and a good bearer; and, with the Roman and Brugnon, makes a good assortment for a small garden.

4. *Dutilly's N.*—This variety ripens about the end of August, and was introduced into England by M. Dutilly Gerrardet, a Dutch merchant, who settled at Putney, in Surrey. From that gentleman it got into the possession of the senior Mr. Hunt, who first established the nursery there; and who, with Grey of Fulham, were both great assistants to Miller, in bringing out his Dictionary.

In the garden of Sir Joshua Vanneck this nectarine was cultivated in great perfection, where it was seen by the author. It has not, however, been much cultivated, owing to its delicacy of growth, and tendency to weaken itself by producing a profusion of bloom, in the manner of Fairchild's; and with

the habit of which it is nearly allied, requiring the same stock and similar treatment.

The leaves are deeply serrated ; flowers small, and of a deep red ; fruit large, and somewhat oval ; dark red on the sun side, and light green on the other. The pulp is melting, very juicy, and richly flavoured. It well deserves a place in every collection.

A south-east or south-west aspect is more suitable for this tree than one due south, as on this, in dry seasons, the fruit are apt to fall before ripening, unless the border is watered. Nicol highly recommends this nectarine for forcing.

5. *White N.*—Ripens the end of August to the middle of September. When first introduced it was deemed a curiosity. It was slowly propagated, because it requires an almond stock ; and it would have remained scarce, had not another been raised, which proved more congenial to the climate of this country. This was called the New White ; and was found equally good as the first, and with the further advantage of being easily raised by budding on the muscle plum stock. The first was introduced by Sir A. Pytches, of Streatham, but is now nearly superseded by the new.

The father of the present Mr. Kirke, of Brompton, was the first nurseryman who had the old white for sale ; but he had great difficulty in working it, though he tried it on peach and nectarine maiden plants. On these the buds took well, but dwindled away in the second or third year. Two of

the finest specimens of the white were at Kew, but they were worked on almond stocks.

The new white was first propagated by Mr. Emmerton, of Barnet, about thirty-five years ago; and who received the cuttings from a reverend gentleman in that neighbourhood, who had raised the new variety from a seed of the old. Mr. Emmerton sold his plants at half a guinea each; and might have had twice the sum had he demanded it, so much was the sort in request at that time.

The tree grows healthily; the leaves large, deeply serrated, and of a lighter green colour. The blossoms are bright red, similar in size to the Newington; the fruit middle size, not quite round, and nearly white all over, the side next the sun only tinged with a little red intermixed with russet; the pulp is melting, and the juice rich and well-flavoured. The tree is an early and prolific bearer, and will be found as hardy as many of the others.

Two very fine trees of this variety were at Claremont, in Mr. Ellis's (now Lord Seaford) time, and no doubt are there still, if they survived to come under the management of the able and experienced Mr. Macintosh.

6. *Claremont N.*—Ripens about the middle of September. This variety was raised by a person of the name of Greening, who was gardener to the duke of Newcastle, to whom Claremont belonged; hence the name. This and the elruge are so nearly alike, in all their characters, that a description would be only repetition; the only difference is in the time

of ripening; the cluge coming a few days earlier. The Claremont forces well; and is in every respect a most desirable fruit.

7. *Scarlet N.*—This comes to table from the middle of August till the first of September. Miller says, end of July; but it never ripens so early of late years. It may be called a good second-rate fruit. The leaves are finely serrated; flowers small; fruit of middle size, and of a bright red or scarlet colour. The pulp, though melting, adheres a little to the stone, which is red; the juice, though not abundant, is well flavoured. This grows freely, and forms a handsome wall tree; bears well, and is suitable for forcing, by which it gains a higher colour.

This scarlet of Miller is called Brinion by Switzer, but of which Miller takes no notice. It has sometimes been sold for the Roman; but it is quite clear, that neither sellers nor buyers were acquainted with either of the fruit; because this is a melter, the other a pavié.

8. *Roman N.*—This is commonly called the red Roman. It is in season from the end of August to the middle of September. None of the sorts have been more generally cultivated than this; and nothing can be a better proof of its excellence. The leaves are slightly serrated; the flower and fruit large, the latter somewhat oval: the colour on the sun-ward side dark red, a small part of the shaded side, light yellow. The pulp is yellowish, firm, and clings to the stone, which is red. The juice is par-

ticularly rich, abundant, and of a fine vinous flavour. The tree grows well, and requires much attention during summer; as on the timely laying in of the young wood, depends its perfect ripening and future fruitfulness.

The author cannot help noticing in this place, that Miller is robbed of his honour by some modern catalogue writers, by giving his descriptions of fruit as their own: this is ungenerous and hardly fair.

9. *Brugnon Violet Musque N.*—This ripens in the beginning of September, and is so near akin to the Roman, that one description does for both; the only observable difference being in the fruit of this, which is smaller than that of the Roman, and with rather inferior qualities. It was in the time of Quintynaie and Duhamel highly prized in France for its flavour, after being allowed to shrivel on the tree; but good judges say, that it loses flavour by shrivelling. The tree deserves a place in every collection.

10. *Brugnon or Italian N.*—Of Miller. Ripe about the beginning of September. This has nearly kept pace in public estimation with its two rival paves, the Roman and Newington nectarines. It may be noticed, that while other Brugnons have large open flowers, this has small contracted ones. The leaves are slightly serrated, the fruit large, and nearly round; of a dark red next the sun, and yellow behind; the pulp is firm, and adhering closely to the stone, which is red; the juice abundant, and of the first quality. It is one of the best of the

pavies ; makes a handsome tree resembling the Roman ; requires much summer care, and appears to do best on a south-east aspect.

11. *Newington N.* — Ripens during September. This is equal to many of the foreign Brugnons, and certainly the best of the English pavie nectarines. The leaves are large, and deeply cut on the edges ; flowers, like the fruit, large : colour of the latter marbled red next the sun, and lively yellow behind. The pulp is also yellowish (a sign of richness in almost every kind of fruit), firmly adhering to the stone, which is deep red. The juice abundant, and of a pleasant vinous flavour. The tree grows healthily, and bears well, especially if planted in light, rather than in heavy loam, and receiving proper management as previously directed.

Several varieties of the *Newington* have been brought out within the last fifty years. Of these, the *Tawny* is one ; Rogers, a nurseryman of Chester, raised another ; and *Lucombe*, of Exeter, added a third. Mr. Aiton, in his *Epitome*, mentions an early *Newington* of which the author knows nothing : but, he believes, all are inferior to the original, though bearing the *Newington* habit in growth and foliage.

12. *Golden N.* — In use from the beginning to the middle of September. A late, valuable pavie ; the leaves are slightly serrated ; flowers small ; fruit full middle size ; faintly red next the sun, and bright yellow next the wall ; pulp yellow ; juice not abundant, but well-flavoured. The pulp is closely attached to the stone, which is pale red. The tree is healthy,

though not vigorous ; remaining freer from insects and mildew than some others ; and may be called a pretty good bearer. The trees under the writer's care at Surrenden, did not do very well ; but he has seen them very fine at Sir Horace Mann's, near Canterbury.

13. *Temple's N.* — Ripens in the middle of September. This variety has not been appreciated so much as it deserves ; for, though not of the first quality as a fruit, it has one valuable property—it continues long in bearing, whether on the open wall or in the peach-house. Had it no intrinsic merit of its own, still it being commemorative of the right honourable baronet who introduced it, is enough with all lovers of fruit to give it a place in their collection.

The leaves are but slightly serrated ; flowers small ; fruit middle size ; of a light red on the sun side, and greenish yellow behind : the pulp is agreeable enough, though small in quantity. The tree is hardy, and does better in moderately than in over rich soil.

14. *Peterborough, Genoa, or Late Green N.* — Ripens about the beginning of October. This is particularly valuable for its lateness ; being mostly found as a companion to the Catherine peach. The leaves are slightly sawed ; the flowers small, and more contracted than those of any other sort. The fruit are middle sized and round ; the colour a pale green on the outside, some years tinged with red ; the pulp is also greenish, firm, but melting, and parts from the stone : the flavour passable.

This nectarine forms a handsome tree of moderate growth, is a prolific bearer, if on a light dry soil, and a good southern aspect. It requires much attention during summer, by laying the reserved young wood close to the wall to ripen it, as no late kind of fruit can be expected in the next year, if the bearing wood be not well ripened in this.

This nectarine was introduced by the great Lord Peterborough from Genoa, and planted in his garden at Fulham, whence it found its way into other gardens of the kingdom.

The foregoing fourteen varieties of nectarine have all been cultivated by the writer, and are such a collection as he can safely recommend according to the descriptions given of them. He is aware that there are three other sorts, *viz.* the Ord's, the Murray, and the Vermash. Of these he has heard good reports; but he can offer nothing relative to them from his own experience. Of the Vermash, a name evidently of French derivation (*ver maché*), he may observe, that it is probably only another name for the Peterborough; and yet being in almost every nurseryman's catalogue, and, above all, figured in Hooker's Pomona, as a distinct fruit, he doubts whether or not he may not be mistaken.

What further relates to the nectarine as a fruit tree, will appear under the head of peach; to which the reader is referred.

SECT. XVII.

ORANGE.

What information the author can give of the culture of this fruit, is reported from what has been done under his own eye; though he cannot boast of his success in his endeavours to naturalize this foreigner in the open ground. But as it is well known that both the orange and lemon are brought to full perfection in the warmer parts of this kingdom, it would have been an omission to have left them out here, though there are but few places where the tree has any chance of succeeding in the open air; and fewer persons who would be at the expense of raising fruit, which can be so cheaply had from every stall in the country.

How far the thing is practicable, however, should be stated; if for nothing else than filling up a niche in the history of British gardening.

Where there is a warm and dry spot, sheltered from the north by hills or thick woods, open to the southward, and within the influence of sea air, orange and lemon trees may be planted against a trellised wall, and trained like other wall trees. To secure them against frost, a wooden frame of some kind is fixed to the wall, so contrived as to admit of canvass curtains, or coverings in pannels, to be put up and down as the season or state of the weather requires. No severe degree of frost should get to the plants; and if there be no flue in the wall, sufficient

covering must be laid on to repel it. When the warm weather of summer is confirmed, say after the end of May, or according to the forwardness of the season, the trees are constantly exposed until the return of winter.

Another way of growing orange trees is by planting standards on the south side of a high wall, and having a fixed frame enclosing them, to receive glazed lights in winter, as well as a fire flue to be heated during the cold season. A house of this description was erected in a small garden near Kew, kept chiefly for forcing flowers for Queen Charlotte, under the management of Green, her Majesty's flower gardener. The fruit produced in this house were excellent : and all the summer, when uncovered, were a beautiful sight.

In some places there are regular orange houses erected for this sole purpose ; in which the trees are trained to a back trellis, or planted as standards in the ground, or kept in large pots, or boxes. Here the trees receive the necessary treatment, and yield abundant crops.

A suitable compost for orange trees to grow in is indispensable, whether planted in the ground or in boxes. The following is what the writer has found most congenial to them. The best and richest loam, mixed with well-decayed stable or cowhouse dung ; three parts of the former with one part of the latter, well turned and incorporated together. This will answer for either borders, where the trees are to be planted, or for boxes. The borders should be made

of sufficient width (four or five feet from the wall) and depth about two feet, and filled with the compost a month at least before the trees are planted. The trees should be put in at eight or ten feet distances, and trained in the fan manner. They require shading during the first summer; and the surface of the border should be mulched to retain moisture, so essential to the growth of orange and lemon.

The China orange is the best variety for this country, being superior to those from the south of Europe. As plants for mere ornament it signifies little what sorts are obtained, so as they flower well.

Orange trees are subject to be infested by the brown scale, or coccus insect; they should be dislodged by the sponge, brush, and water, which prevents them breeding.

The above mentioned Mr. Green, was a first-rate florist, and besides a good and ingenious man. He was the inventor of the *Fumigating Bellows*, for which he had a premium awarded him of twenty guineas by the Society of Arts, Manufactures, and Commerce. He was a favourite of the Queen, and died in her service, aged eighty-one.

SECT. XVIII.

PEACH.

Very little need be said respecting the high estimation in which the peach has been long held in this and other countries. It is certainly the finest fruit

produced in the open air in Britain, and there cannot be too much care bestowed in the propagation, culture, and preservation of the numerous fine varieties now in our possession; nor can too much practical knowledge be disseminated relative to the best methods of bringing the fruit to perfection.

What has been already mentioned in respect of the soil, borders, situation, and planting of the apricot; and to watering and mulching the borders in dry weather, is also applicable to the peach. But if a border were to be formed for peaches only, then in that case it may be made somewhat stronger than for either apricots or plums, by the addition of good soft loam, but in no case to be of less width, nor of greater depth. The subsoil should also be, either by art or nature, dry: for without a dry bottom no well-flavoured fruit can be expected.

In planting a collection of peaches, dwarfs and standards (that is, riders), let it be observed to have the dwarf and the rider over or next it of the same kind. This is convenient, because when the rider comes to be removed, or reduced, it is done without breaking the collection. Weakly and vigorous sorts should be placed alternately.

Three kinds of stocks are necessary for the successful propagation of the peach, *viz.*, the muscle plum, pear plum, and the Brompton stock. The muscle is the principal for such as are called English peaches, they taking more freely on that stock; whereas such as are called French peaches, require the pear plum, or some similar stock.

The kinds called French, are dearer than those denominated English peaches; the reason is, that their stocks are not only dearer, but there is much uncertainty in making a "good hit" of them by budding. Consequently some of them — as the French mignon and gallande, two of the best — are often very scarce. Were there as much difficulty in propagating English peaches, maiden plants one year from the bud would be worth three times the sum now charged for them.

The history of the Brompton stock is not very clear; for though it has been long used in nurseries, there is no good account of how it originated. It has been lately rather "cried down," which was alarming to a nurseryman who might happen to have a number of saleable trees worked upon it. The author did not believe the "report," but he took the opinion of a very competent judge, who gave for answer as follows:—"I have no reason to think, that the Brompton stock will not bear as fine fruit, and last as long, as either the muscle or pear plum, if budded low for dwarfs." Signed "*H. Ronalds*, 13th August, 1833."

It may have happened that a dislike to the Brompton stock was taken at seeing the fate of apricots budded upon it; for which fruit it is ill adapted and unsuitable.

In respect of training the peach, what has been said of the apricot is also applicable here; so that it need not be repeated. Seymour's and Kendal's

papers on pruning and training the peach, published in the Gardener's Magazine, have great merit, and should be known by every young gardener ; and with this advice at the same time—to be aware of the danger of planting too deep in a rich soil.

The peach tree is particularly subject to a fungus called mildew ; but which is soon got rid of by dusting the points or shoots affected with flour of brimstone after watering, provided this be applied soon as the mildew appears ; or with the liquid hereafter recommended. It has been thought that the malady attacks peaches worked on muscle stocks sooner than those on other stocks, but this idea has not been confirmed.

In gathering peaches, much care is necessary lest they are bruised, clean gloves should be worn : the hand placed below the fruit should be gently raised, which will detach it if ripe enough without any force. When gathered, each fruit should be laid on its base, and on some moss or other soft material.

Peach and nectarine trees may be removed with safety when ten or twelve years old. Careful taking up, keeping all the roots entire, replanting with the precaution of laying out every root in its natural position, covering up not too deeply, giving water, and afterwards mulching, are the usual expedients to ensure success.

The methods of working and training both dwarfs and rider wall trees, have been already described under Apricot. Stocks trained standard-high, and

then budded, are said to be more lasting than when the bud is trained so as to form the stem. But this is not generally true, as the latter are known to last as long as the other.

Sometimes large irregular swellings occur at the junction of the bud and stock; but this is no detriment to the tree, as it neither affects the growth nor bearing.

For destroying the red spider, observe the directions given for the vine. Ants are got rid of by taking their nests, and strewing soot round the stem of the tree. Earwigs are captured by placing dry bean stalks among the branches for them to hide and be caught in. Wasps and flies must be allured into bottles of sugared water; and the aphis is banished by tobacco-dust or smoke.

The following is a selection of all the best leading sorts now in cultivation, *viz.*—

1. *Avant Rouge P.* — Ripens about the beginning of August. This is the early red, or red nutmeg. The leaves are finely serrated; flowers large; fruit below the middle size, and nearly round; the colour a fine red next the sun, pale yellow behind; pulp of a yellowish cast, and separates from the stone, which is reddish; juice plentiful for so small a fruit, and of pleasant flavour. Miller and his copyists state, that it has a musky flavour; but this is scarcely perceptible. The tree is of a more hardy nature than any of the three next mentioned, is a good bearer, and forms a handsome tree of the second size, and generally free from mildew.

This variety should have three situations in the garden, *viz.* one due south, another south-east, and a third on a south-west aspect. This is for the purpose of continuing their season of ripening; which, by such means, will be prolonged through the month. For a single tree, however, the south-east aspect is perhaps the best.

The *avant* being one of the French peaches that does not take on the muscle stock, must only be budded on the pear plum, or Brompton stocks, to ensure success. It requires much care in early spring, to secure the flowers against frost.

2. *Pourpre Hative P.*—Ripe the end of August. The leaves are slightly serrated; flowers large; fruit rather small, nearly round; colour marbled red; pulp melting, and red at the stone; juice abundant, and of delicate flavour. The tree is healthy, bears well, and is well worth cultivation. There is another sort of peach in French catalogues allied to this; namely, the violet hative, which only differs a little in the shape of the fruit. Both sorts are scarce.

3. *Early Anne P.*—In season from the middle to the end of August. This is supposed to be an English variety, having been raised by a lady of the name of Anne Dunch, somewhere in Berkshire, in the reign of George I. Miller has not noticed it in his Dictionary of 1743, though it is described by his contemporary Langley. The leaves are doubly serrated; flowers large; fruit small; colour nearly white, with faint dashes of red; flesh melting, and white at the stone. In fine seasons it arrives at good

perfection, both as to quantity of juice and high flavour. It is, however, a tender tree; but a good bearer, if attended to in the spring. It takes readily upon the muscle plum stock, and for its earliness deserves a place in every collection.

4. *White Magdalen P.* — Middle and end of August. This is an old and favourite variety, having been in this country above one hundred and fifty years. It is not equal to either the avant or early purple; but it has one convenient property, it takes well on the muscle plum stock. The leaves are deeply sawed; the flowers large, and of a light pink colour; fruit full middle size, nearly round, with a deep furrow on one side; colour dull white, marbled with red next the sun; pulp white, with a tint of red at the stone, from which it separates; and is juicy, melting, and of pleasant flavour enough. The tree may be called one of the second class as to growth; but rather delicate, requiring extra care, particularly in thinning its fruit, which are mostly over-abundant. Miller's description of the fruit agrees with the above; and adds, that it is sometimes liable to drop its fruit. This, however, only happens in very dry summers, from neglect, in allowing the borders to become exhausted of necessary moisture, which never should be the case when there are water, watering-pots, and a syringe at hand. Forsyth is of opinion, that it is not high flavoured in the open air; but recommends it as well worth forcing. In this he is followed by subsequent writers,

who, it appears, have neither consulted Duhamel nor Miller.

5. *Purple Alberge P.* — Ripens about the end of August. This, though only a second-rate fruit, is approved of by many good judges. The leaves are a little serrated; the flowers small; the fruit are middle sized, globular, with a deep furrow on one side; colour dark purple or violet next the sun, varying to a light red next the wall; pulp yellow, but reddish at the stone, from which it separates; the juice is plentiful, rich, and of a fine vinous flavour. The tree is a second-rate, healthy, and a good bearer; and the fruit, from their peculiar colour, form a fine contrast with other peaches in the dessert. The tree takes readily, budded on the muscle stock.

There is another variety, called the Yellow Alberge, a fine-looking fruit, but of very inferior quality.

6. *Belle Bauce P.* — Ripens about the beginning of September. This is rather a new variety, the writer not having known it more than twelve or thirteen years. It was highly spoken of and recommended by Mr. Lee, of Hammersmith, and it has not disappointed expectation.

The leaves are deeply serrated, but not so much so as the white Magdalen. The flowers are large; fruit oval, with a small furrow on the side; colour a bright scarlet nearly all over. The pulp is yellowish, juicy, and richly flavoured. The tree is healthy, and generally a good bearer. It requires a pear

plum or Brompton stock: on the latter it does very well, and a west aspect seems to suit it perfectly.

7. *Early Gallande P.* (Reynolds's.) — Ripens about the end of August. This is a very excellent peach, introduced by the late Mr. Ronalds of Brentford. The leaves are slightly sawed; flowers small; fruit full middle size, handsomely shaped, with a shallow lateral furrow; deep red colour on the sun-side, yellowish green on the other. The pulp melting, parts from the stone, which is reddish; juice plentiful, and of high vinous flavour.

It is a tree of moderate growth, does well on a west aspect, and in all probability would answer in pots. It requires to be budded on the pear plum stock.

8. *Belle Chevereuse P.* — Comes in about the beginning of September. This peach is remarkable for its downiness, which its name imports. The leaves are serrated; flowers rather large; fruit middle sized, somewhat oval, with a slight lateral furrow; colour bright red, light green where shaded. The pulp is melting, and red at the stone, from which it parts freely.

The tree, though not vigorous, is healthy; is a generally good bearer, and does remarkably well in pots. The pear plum or Brompton stock is fittest for it.

There is another, called the late chevereuse, which is well spoken of by Duhamel; but with its

merits the writer is not sufficiently acquainted, so as to enable him to give a faithful description.

9. *Early Admirable P.* — Beginning to the end of September. This is one of the best peaches ripening in this month: it is called early, to distinguish it from *la royale*, the late admirable of English nurseries.

The early admirable has finely serrated leaves; the flowers similar to those of the *belle chevereuse*; fruit full middle size, globular, rich red colour next the sun, greenish yellow behind. The pulp is firm yet melting, white at the stone, from which it separates freely; the juice is abundant, and highly flavoured. The tree belongs to the first class as to growth, and is generally healthy. In the summer management of this tree, it is frequently necessary to stop its over-luxuriant shoots towards the end of May, to induce moderate growth, so conducive to fruitfulness. This expedient of stopping the luxuriant growth of both peach and nectarine trees, so successfully practised by the Dutch and French gardeners, should be more attended to in this country than it is; for it is impossible to have fruitful shoots, unless they are of moderate growth. This peach takes freely on the muscle stock, and is well adapted for forcing.

The ten or twelve sorts which follow, together with the one just mentioned, are all suitable for forcing, and all ripen nearly about the same time, *viz.* —

10. *French Mignon P.* — Ripens about the beginning of September. This has been a great favourite ever since its introduction by the Hon. Mr. Capel at Kew, a hundred and fifty years ago.

The leaves are light green, and finely serrate : the flowers large, and carmine coloured ; the fruit large, somewhat oblong, with a lateral furrow ; the skin remarkably soft and velvety, fine red next the sun, and yellowish white behind. The pulp is yellow, juice abundant, with a very rich vinous flavour ; red round the stone, from which the pulp separates freely. Miller extolled this peach, and it has lost none of its character since. When well managed it makes a healthy tree, and prolific withal. For pots and moderate forcing under glass, there are few superior.

The finest French mignons the author ever saw, were forced in a Dutch pit in Richmond Gardens. The back wall was about eight feet high, and the width nearly the same. The trees were trained to a trellis against the back wall ; a path in the middle separated off an open pit along the front ; and it is for the sake of stating the use this pit was put to, that the circumstance is mentioned. This pit was filled and kept filled with well-worked hot dung ; the heat and steam constantly rising from this, was trusted to, to invigorate the trees and keep them free from insects, which it certainly did. This was a homely way of forcing and steaming ; but it was most successful.

Nothing shows the value of the French mignon in a more striking light, than the great number of trees which have been, by one or other, sold under that name, or in that of the gross mignonne. In this the public have been grossly deceived ; because they are advertised as two different kinds, while in fact they are identical. In one catalogue there are above *thirty* mignons ! or rather thirty persons who have claimed the tree as their *own* mignon. Surely this multiplicity of names can serve nobody but the printer, and should be corrected without delay.

There is, however, a variety introduced by the late Mr. Lee of Hammersmith, called the Early Vineyard, which comes very near to the French mignon in leaves, flowers, and fruit ; but this the writer admits to be different.

The pear plum, or Brompton stock, are proper for this peach ; and the style of summer treatment and pruning, is similar to that advised for the Fairchild's nectarine.

11. *Grimwood's Royal George P.* — Beginning of September. Only a French mignon with another name.

12. *Royal Kensington P.* — Ripens beginning of September. Another French mignon with a borrowed name.

13. *Double Montagne P.* — In use from the end of August to the middle of September. We are indebted to the Dutch for this very good fruit. It bears a great resemblance to the noblesse, but it is

constitutionally different; the Montagne requiring the pear plum stock, while the noblesse will only succeed on the muscle.

The leaves are deeply serrated; flowers large; fruit full middle size, and globular; colour marble red towards the sun, and greenish white on the shaded side. The pulp is white throughout; the juice abundant, and of a peculiarly rich flavour. Indeed, it is one of the best melting peaches: grows, bears, and forces well. In giving it space on the wall it may be considered in the second class. It generally ripens its wood well; of course prolific. The stone has been described as "mucronate," a phrase very unsuitable in a practical work.

There is another favourite peach in Dutch gardens, which has been cultivated in this country under the name of Double Swalch. It is a good second-rate fruit, the pulp parting freely from the stone. It requires a pear plum stock, refusing the muscle; on which account, perhaps, it is neither much propagated nor sought after.

13. *Violet Hative P.*—Ripens in the beginning of September. A very useful variety, and should be in every collection. The tree is healthy, prolific, and forces well.

The leaves are slightly sawed, the flowers small, or winking (such flowers are less liable to be injured by frost than the large open ones); fruit full middle size, somewhat ovalar; colour dark violet next the sun, pale yellow behind. The flesh is white, except a dash of red near the stone, which is com-

paratively small; the juice plentiful, and richly vinous. The tree is remarkably exempt from the attack of mildew; while the red Magdalen, the Royal George, &c. are suffering, the violet hative standing in the same quarter escapes entirely.

For a small garden it is well calculated: to which if there be added a French mignon, a noblesse, and an old Newington, a succession of peaches of the best quality may be had in due season.

The violet hative has been most erroneously confounded with the Bellegarde. No one acquainted with the two kinds could possibly fall into such a mistake, because they require different stocks. The Bellegarde will not take on the muscle plum stock, while the violet hative does so most freely; which is a certain sign that the trees are constitutionally different.

In French catalogues there are two violet peaches; the *hative* (early) as above, and *tardive* (late). The latter is the *pêche violet* of Miller.

15. *Old Royal George P.* — Usually ripe about the beginning of September. No peach hitherto introduced into this kingdom has been held in higher estimation, or more universally planted than this. The leaves are deeply sawed, though not so much so as some others; the flower small; fruit full middle size, globular, with a deep lateral furrow; colour dark red on the exposed side, and paler behind. The skin is thickly downy, with numerous red spots peculiar to this fruit. The pulp is delicately melting, yellowish, and separates freely from the stone, which

is large and red. From the quantity of fine rich juice it contains, it is one of the heaviest of its size.

The tree grows healthily, but it requires much care to keep it so. It is particularly subject to mildew, and therefore must be defended from it, by a timely application of the remedy hereafter recommended. As it is a great bearer, attention must be given to thinning the fruit at the proper time.

Difficulty is sometimes found in propagating the true royal George on any of the three common stocks; those buds which chance to take on the muscle stock make the best trees, and should always be preferred. When forced, it keeps its natural colour, and remains a considerable time in gathering.

When this sort was introduced is uncertain: but it is mentioned by Powell, who was gardener to George II and Queen Caroline, at Richmond Lodge. There are two more royal Georges of recent introduction; one the royal George mignonne, by Mr. Ronalds of Brentford; the other "the smooth leaved," by the late Mr. Lee of Hammersmith. They are understood to be both good melting peaches.

16. *Red Magdalen P.*—Ripe about the beginning of September. This is an excellent fruit, and would be more extensively planted were it not for the tree being so liable to mildew, particularly in strong soils. The leaves are like those of the royal George; the flowers small, fruit middle size, deep red colour next the sun, whitish next the wall: the pulp is white, melting, and red at the stone, from which it parts. The juice is finely flavoured and

plentiful. The tree is a good bearer; and takes well on the muscle stock.

Miller, in one of his editions, describes the red Magdalen as Madeleine Courson with *large flowers*. This the writer knows nothing of; though it is said to be in the collection of Miller of Bristol. In a French catalogue, the Madeleine Courson is mentioned as being a variety of the Madeleine tardive, with small flowers, and ripening in October; but as no description is given of the leaves, nor whether subject to mildew, its identity is uncertain.

An east aspect is most suitable for this peach, though Miller says, this exposure is more liable to mildew than any other, and so it may be in damp or low situations; but much depends on the soil and season. The red Magdalen may be forced under glass, but it cannot be recommended for that purpose.

17. *Millet's Mignonne P.* — Ripens about the beginning of September. This is another favourite peach. The leaves and flowers are like those of the red Magdalen; fruit middle size, nearly round, with a small rising on one side of a shallow furrow: colour a fine but not a deep red on the sun side, pale green on the other. The pulp is white, melting, and full of a rich pleasant juice, parting from the stone, which is red. It forms a handsome tree, and with care may be kept healthy. It is a prolific bearer, and takes well on the muscle stock; forces well in pots, or otherwise, as was most successfully done by Mr. Brown, gardener to the late Lord Cremorne, at

Chelsea, who kept all his trees in tubs or boxes, like orange trees, for years, and supported in such confined situations, chiefly by the use of soft manured water. House droppings and a little soot, were the only substances employed to enrich the liquid. Mr. Brown's favourite sorts, for forcing and growing in this manner, were the French mignon, early admirable, Millet's mignon, violet hative, and for later fruit, the Bellegarde or Galland. The noblesse he considered too large for his mode of forcing. The writer has often had good success with dwarfs and half-standards potted early in autumn, and afterwards plunged in dry soil to stand the winter; being also in a sheltered situation, these trees produced fair crops, and which ripened eight days sooner than those on the walls. The kinds that did best under such treatment, were the violet hative, Millet's mignonne, and Montaban. Millet was an eminent fruit grower near Brentford, and raised his mignonne from a seed of the French mignon.

18. *Noblesse P.*—Ripe at the beginning of September. This sort, from being a universal favourite, is also called the noblest. The leaves are deeply sawed, the flowers large, fruit full-sized, and nearly globular; colour marbled red on the exposed side, and light yellow next the wall. The flesh is yellowish, melting, and parts from the stone, at which there is a tinge of red; the juice is abundant, and of a peculiarly fine flavour.

The tree is a free grower and good bearer; and if only three trees be wanted for a small garden, this

should be one of them. Any aspect except north suits this peach; and it is easily and successfully forced.

As to calling the noblesse *Mellish's favourite*, it is nonsense! Every nurseryman in the kingdom has a favourite customer (which may be supposed to be that one who lays out the most money with him), who may have favourite fruits; and our lists would be so filled with favourites, that the real names would be ultimately lost.

There was a peach once advertised, under the name of Allen's noblesse, or royal Charlotte, but which proved to be a seedling, raised by Lowe of Hampton-Wick, and by him called royal Charlotte, by others Lowe's melter. It appears to be a variety of the noblesse; but there is this difference, the Charlotte requires a pear plum, whilst the real noblesse takes more freely on the muscle stock.

19. *Montaban P.* — Ripens about the end of August. This is very near akin to the noblesse, both in appearance and qualities. The leaves are deeply serrate; flowers large; fruit middle size; coloured red next the sun, and yellowish behind. The pulp is melting, white, except near the stone, from which the pulp separates, which is juicy and of good flavour. The tree is healthy, and a good bearer; forces well, and is a favourite with most gardeners who have had the care of it. It takes well on the muscle stock.

20. *Superb Royal P.* — Ripe about the beginning of September. The leaves are slightly serrate, the flowers large, and of a bright scarlet colour. The

fruit middle size, nearly globular, but with a rising along the side of the furrow, bright red next the sun, light yellow behind. The pulp is tinged with yellow, and a little red next the stone, which is small; the juice rich and abundant; and altogether a good melting peach. It forms a tree of the second class, and a good bearer.

From this description it will appear, that this is nearly allied to the French mignon, and it requiring a pear plum stock, is a further confirmation that they are constitutionally alike.

This sort originated with H. Shailer, who succeeded Grimwood in the Chelsea Nursery, on the latter's removing to Kensington. Shailer received cuttings, with a high character, from a gentleman to whom he was known; he propagated and fruited plants: the fruit were so fine, that he thought the sort worthy a high-sounding name, which he accordingly gave it, and which it has borne ever since. Perhaps it may be said, that under ordinary circumstances, the French mignon maintains its old character; but if it be removed to a fresh situation, placed on a peculiarly congenial stock, and receive superior treatment, the fruit are enlarged, and then the tree becomes the superb royal or royal sovereign.

21. *Barrington P.* — Ripens between the 1st and 20th of September. The leaves are slightly sawed; the flower large and pale coloured. The fruit full middle size, round, with a deep furrow; marbled with light and deeper red on the sun-ward side,

yellowish where shaded. The pulp is somewhat yellow; parts from the stone; is juicy and richly flavoured. The tree is healthy, not over vigorous, prolific, and well worth cultivation. It requires the pear plum stock, not taking readily on the muscle.

22. *Bourdine P.* — Ripens about the middle of September. This variety was once more in repute than it is now, though it is unquestionably a desirable fruit. The leaves are slightly serrated; the flowers small; fruit large, irregularly round, having a deep lateral furrow, with prominent ridges on each side; reddish next the sun, greenish behind. The pulp is greenish white, melting, separates from the stone, which is deep red. The juice is sweet and plentiful, but its quality much depends on the favourableness of the season. It is a good bearer, but requires the pear plum stock, as it will not take kindly on the muscle plum.

The *Bourdine* has been, by some writers, supposed to be the same as the late admirable, and the *teton de Venus*. This is unaccountable; for no one acquainted with the three fruits, could ever conceive them to be the same.

23. *Bellegarde-Galland P.* — Ripens about the middle of September. This double name appears in French catalogues, and by which it was introduced into this country. The double name is however improper, because it appears to signify that there are *two* *Bellegardes*.

The leaves are slightly serrated, the flowers very

small; fruit very round, with a slight furrow; colour a deep purple or crimson, on the shaded side light green. The pulp is melting, rather tinged with yellow, and parts from the stone, which is marked with red; the juice is rich and abundant.

It is a prolific bearer, but does not grow vigorously, in consequence of being worked on the pear plum; which, however, is the only fit stock for it. In extensive forcing-houses, this tree should always have a place for yielding a late supply, more especially as the fruit ripen, not together, but successively, for a considerable time.

As this is a late peach, it may be observed of it, and all other late sorts, that they should have the warmest situations in the garden; that their bearing wood should be kept thin, and always laid in close to the wall; that the fruit be timously thinned; and that just before the fruit ripens, a few of the leaves be plucked off, to admit sun and air to the fruit and wall. It may also be advised in this place, that, as soon as the crop is gathered, the trees should receive a good dashing of the liquid recommended, from the engine, to dislodge insects which may nestle in the wall or on the trees.

24. *La Teton de Venus P.* — Ripens in the end of September. This favourite French variety has been long cultivated in English gardens. The leaves are more deeply serrated than the Bellegarde; the flowers small and contracted; the fruit large, and somewhat elongated, having a very deep furrow, making the fruit appear double, and having at the point a pro-

truding part like a nipple or teat : hence the name. The colour a blush red on the sun side, and yellowish on the other. The flesh is white, but red at the stone, from which it separates, and full of fine-flavoured juice.

The tree is hardy, consequently healthy, and not liable to mildew. It is also a good bearer if worked on the pear plum ; for though it sometimes takes on the muscle stock, such is not to be preferred.

25. *Chancellor P.* — Ripens towards the end of September. (Miller says the end of August ; but we do not find it so in these days.) And here it may again be observed, that almost all the writers about the beginning of the last century — viz. Switzer, Langley, and Miller — give earlier dates for the ripening of the fruits they describe than we find them to do at the present time ; and this would lead us to infer, as before observed, that the summers were warmer in those days than what we now experience.

The leaves are slightly sawed ; flowers small, and of a bright red ; fruit large, somewhat oval ; where exposed to the sun fine red, and light yellow behind. The flesh is also yellowish, but red at the stone, from which it separates. The juice is abundant and richly flavoured, particularly in dry seasons and on a dry soil ; on which last all the late peaches should be planted, not only to accelerate their ripening, but improve their flavour. This variety requires the pear plum stock, on which it becomes a middle-sized tree and a good bearer.

26. *Late Admirable P.* — Ripens at the same

time as the preceding. Miller describes this fruit as the pavie royal, or pêche royal—a very improper name for a melting peach; but he evidently means the pavie royal, which is our incomparable.

The leaves of the late admirable are large and slightly saw-like on the edges; flowers small; fruit the largest of the season, except the pavie de Pompone (which, by the bye, is not worth cultivating); nearly round, with a deep furrow and beak like the teton de Venus. The colour a marbled red nearly all over; pulp is white, melting, and separates from the stone, which is very red; juice plentiful, and of rich flavour. The tree is a vigorous grower, and requires much care to get the young wood well ripened; as well as an ample space of wall or trellis. It takes freely on the muscle stock.

There is another peach very similar to this, called by the French gardeners the nivette; but it is inferior to the late admirable. The nivette requires either a pear plum or a Brompton stock, but few are propagated. There is yet another, called Hemskirk, in English catalogues; but of this the writer can give no good account.

27. *Pourpre Tardive P.* — Ripens at the end of September. The leaves of this late purple are large, and deeply cut on the edges; the flowers small and winking; fruit full middle size, nearly globular; deep red or purple next the sun, yellowish green next the wall. The flesh is white, melting, and separates from the stone, which is red: the juice is abundant, and of a fine vinous flavour.

It is a good bearer, and forms a handsome tree on the pear plum stock; but requires much attention to ripen both the wood and fruit in unfavourable seasons. It well deserves a peach house.

28. *Rambouillet P.*—Ripens between the middle and end of September. The leaves are slightly serrated; flowers large; fruit full middle size, nearly globular, with a deep lateral furrow; lively red towards the sun, light yellow behind; flesh substantial, though melting; parts from the stone, which is very red. The juice is excellent, though not so abundant as in some others. The tree is of a hardy habit, and a good bearer; and the fruit has one quality which few other melters have—it bears carriage well, and keeps good two or three days after it is gathered. It takes most kindly on the muscle plum stock.

N. B.—The foregoing twenty-eight sorts of melting peaches, together with the four pavies which follow, the author can recommend with the utmost confidence to planters. The accounts given, are drawn from long personal experience, and may be relied on; and he conceives enough are enumerated, whence a sufficient collection may be made for every purpose of a planter, and for any establishment whatever.

29. *Smith's Early Newington P.*—In perfection from the beginning to the middle of September. An early pavie, or clingstone, raised from a seed of the well known old Newington. The leaves are doubly sawed; the flowers large, and pale red; fruit full

middle size, longish shape, and somewhat irregularly formed. The colour marbled red where exposed, and greenish yellow where shaded. The pulp is yellowish and firm, red at the stone, to which it adheres, but yielding a very finely-flavoured juice. The tree is healthy, prolific, and ripens its fruit well either against an east or west wall. It takes freely on the muscle stock: and, in the summer management, care must be taken to have the young wood well ripened.

30. *Old Newington P.* — Ripens from the middle to the end of September. This, from its name, may be deemed a real English pavié; but how it originated is unknown. It is mentioned by Parkinson about the middle of the seventeenth century, and has been much esteemed ever since. The leaves are large, and doubly serrated; the flowers large and pale, like those of the preceding. The fruit are large and round, of a beautiful red next the sun, and yellowish-green behind. The pulp has a tinge of red, is substantial, and adheres to the stone like the Brugnion nectarine. Juice very abundant, rich, and of a peculiar vinous flavour.

Miller complains of its being but an indifferent bearer, but ascribes this defect to the right cause, *viz.* too deep planting on heavy soils; hence luxuriant growth, and too much pruning. If moderate growth be induced by a dry soil and shallow planting, the summer shoots may be thoroughly ripened, in which case there need be no fear of barrenness. This peach takes freely on the muscle stock, on

which it sometimes throws up shoots standard-high in the first year.

This peach is as much esteemed in France as in England. The gardeners there call it *la bonne d'Angleterre*.

31. *Incomparable P.* — Ripe about the beginning of October, sooner or later according to the season. This is a pavié of considerable merit, and deserves a place in every collection, were it for nothing else than the size and rich beauty of the fruit. The leaves are large, and finely sawed; the flowers small; fruit large, irregularly round, and finely mottled with pale and deep red on a yellow ground. The pulp has a yellow cast, but red at the stone, to which it firmly adheres. Juice rather plentiful for so late a fruit, and keeps for a considerable time after being gathered. It takes freely on the musclem plum, and grows luxuriantly, requiring full space on the wall. The fruit is not of sufficient excellence to be recommended for forcing.

32. *Catherine P.* — Ripens in October and November. A most useful and well-known sort, raised in this country before the commencement of the last century.

The leaves are finely serrated: flowers small, red, and much contracted; fruit full middle size, rather oval, and irregular in shape, having one side of the furrow higher than the other. The skin is velvety, with a little marbled red next the sun, and greenish white next the wall. The pulp is firm, red at the tone, to which it adheres; in some seasons the juice

is rich and plentiful. It is a good bearer: but its perfect ripening depends much on the soil and situation being dry and warm. It takes freely on the muscle stock, and forms a handsome healthy tree. The fruit remain long on the tree; and sometimes require matting on the approach of frost. Or if gathered before they are quite ripe, they are improved by being kept in a warm place.

Kyle and Nicol, both intelligent Scotch gardeners, recommended this with the yellow admirable for forcing. Whether these persons wrote from experience, the writer is ignorant; but he never knew of either being forced in England. He has seen the yellow admirable, called by the French abricotee, in a garden at Wandsworth near London, a fine showy fruit, of a dark yellow colour, with a few streaks of red on the sun side. The pulp was neither melting, nor yet could it be called a pavié, it was something between both: but it was full of sweet juice, and altogether a fair kind of peach. Another called the scarlet admirable, or dragon, has been met with by the writer. This is also a fine, showy, high coloured fruit; but in the place where he saw it in great perfection, the gardener said it was chiefly used for tarts. Many of the celebrated American peaches are of this description. At least so turns out the famous *George the Fourth* of American origin: and the *President* which followed, is not one whit better. From all accounts however, peaches are cultivated from seed with great facility in the United States. The stones are sown on a seed bed thickly; the most

promising of the seedlings, that is, those having the strongest wood and largest leaves, are selected and planted out; in the fourth or fifth year they begin bearing, and out of thousands of subvarieties thus produced not one is fit for the dessert; and only fit for the uses they are chiefly cultivated for, *viz.* feeding swine, and for the manufacture of peach-brandy. They have some superior sorts certainly, which are fit for the dessert, but they are comparatively few.

With respect to the best season for pruning peach trees, the author disagrees with Harrison, who advises autumn pruning; and agrees with Forsyth in recommending spring pruning. Nor would he advise the knife to be used till the buds begin to swell. It sometimes happens that young shoots or old branches receive injury, or die during the winter, and which cannot be seen till the spring growth commences; another thing, the later a peach tree is pruned, the sooner are the wounds healed. Both these circumstances sanction the propriety of spring pruning.

The two following lists are useful to young nurserymen, *viz.*

Peaches which may be budded on the muscle plum stock.

Early Anne.

Purple Alberge.

White Magdalen.

Millet's Minion.

Late Admirable.

Incomparable.

Scarlet Admirable.

Smith's Early Newington.

Peaches which may be budded on the muscle plum stock.

Red Magdalen.	Old Newington.
Montaban.	Old Royal George.
Noblesse, old and new.	Rambouillet.
Early Admirable.	Catherine.

Peaches which may be budded on the pear plum or Brompton stock.

Avant Rouge.	Double Montagne.
Pourpre Hative.	Superb Royal.
Belle Bauce.	Barrington.
Early Gallande.	Bourdine.
Belle Chevereuse.	Bellegarde or Galland.
Grosse or French Mignon.	Chancellor.
Grimwood's Royal George.	Late Purple.
Kensington.	Teton de Venus.

N. B.—In the foregoing descriptive catalogue the sorts follow each other as near as can be in the order of their ripening.

SECT. XIX.

PEAR.

The pear, next to the peach and nectarine, is held in high estimation; and as many fine kinds of pear are capable of being stored for several months, this enhances their value as a useful fruit. Pears are not

so generally planted as some other sorts, owing no doubt to the young trees being so long barren after they are planted. This loss and discouragement is, in many cases, increased by mismanagement: for it is no uncommon thing to meet with pear trees from twelve to twenty years old, which have never shown either flower or fruit. But the writer flatters himself that, if what is in his power to offer as advice and instruction be observed, he doubts not but that those who follow, will find it to their interest and satisfaction.

One of the first considerations is the production of proper stocks. These raised from the seeds of some of the cultivated varieties are both more convenient and suitable, than stocks raised from the wild crab pear, which in this country are now very scarce. The seeds of the most erect growing pear trees are usually chosen for raising stocks from; such as the summer bergamot, the swan's egg, and the Windsor. These produce seedling stocks which soon run up standard high, and fit to receive the graft; whereas were seeds of dwarfish growing kinds employed, the seedlings are apt to partake of the habit of the parent tree, and be longer in gaining the desired form and height. Here it may not be amiss to pay a deserved compliment to both the French and Flemish nurserymen, for the pains they take in keeping distinct, and classifying their stocks. Tall and strong growers, middling growers, and dwarfish growers, are each kept separate, and grafts adapted to them according to the purpose of the planter. This practical ex-

pedient is perhaps less regarded in this country than it ought to be. It is true we use the quince stock for checking the luxuriant growth of some of our pears; but it is not improbable that stocks raised from the seeds of the petit muscat would answer quite as well for the purpose.

Many of the best pears are difficult to get up from a low graft or bud; and it is to be observed, that pears worked standard high, always come into bearing sooner than such as are from dwarfs.

To the continent we are beholden for perhaps all our best sorts of pears, and which originated there either by accident or design. All the French Bezi's are wildings; as Bezi Chaumontelle, the wilding of that place. So also were the Cresan, Colmar, &c. But the French and Belgians have also raised many new varieties from seed. Few such attempts were made in England till within these last thirty years. While in possession of the Jargonelle, the Autumn Bergamot, the two Beurrée, Chaumontelle, and Colmar, the British gardener thought these could not be surpassed, and therefore sought no others. But an impulse has been given to this branch of the art, as before observed, by Mr. President Knight, Mr. Williams of Pitmaston, and by the late Mr. Braddick of Bury Hill. Several new and excellent pears have been lately originated by the scientific exertions of these gentlemen, and by importations from France, of which some account will be given in the following pages.

The quince has already been alluded to as a stock for the pear; but there are some sorts which do not succeed on the quince, either by bud or graft. To remedy this, double working was had recourse to; that is, first grafting the quince with a pear, such for instance as the *virgouleuse*, and on that in the next year working any other sort required.

What has rendered the quince stock of so much repute in this country, is the bad success attending the ordinary method of planting pears worked on seedling stocks in too deep and too rich borders; which causes such exuberant growth and consequent barrenness, that the trees were only useless cumberers of the ground. Now, had the borders been properly prepared, by having a hard dry bottom, with a surface layer of light fresh loam, about fifteen inches deep only, the same trees would have taken a kindly growth, and very soon would have been fruitful. A decisive proof of the efficacy of this plan of planting pear trees is given by the intelligent Mr. Hiver in the *Gardener's Magazine*, vol. v, p. 60; a paper which should be read by every young gardener and planter in the kingdom.

As to the method of gathering and storing the fruit, the reader is referred to what has been advised for the apple.

Pear trees suffer from insects, and extreme atmospheric changes, like other fruit trees. But the greatest injuries to which the tree is liable, proceed from late frosts; the earliest flowering sorts are

always in the greatest jeopardy ; and those on walls blowing first should always be matted up when frost threatens.

In the summer management of wall and espalier pear trees, the common practice is to cut clean away all the young shoots, except the leaders, and any one farther back where a vacancy requires to be filled up. But this is not judicious treatment ; because it is only exciting the tree to reproduce another birth of similar shoots to be again cut away. Either no such summer shoots should be allowed to come forth at all, by early disbudding, or stopping, or twisting the points when they are about five or six inches long. This may induce some of the buds at the base to be formed into flower buds, down to which they may be shortened at the winter pruning.

Riders on walls, or standards in the orchard or garden, come sooner into bearing than dwarfs. And the reason is, the length of stem impedes the too rapid flow of sap into the branches, and thus renders them sooner fruitful.

Several new sorts have been lately introduced from the continent ; some of them require to be planted against walls ; though none are better than our own old sorts, and which certainly should not be displaced by the new. This is the opinion of Mr. Charlwood of Covent Garden, than whom there is no better judge in Europe.

The descriptions of Miller are mostly taken from Tournefort, Merlet, and Duhamel ; and these de-

scriptions, tested by the experience of the author, are here adopted relative to all the best sorts worth cultivation in Britain. The sorts enumerated and described here, have nearly all been propagated and cultivated by the author, and who has borrowed nothing from others but what he can vouch for as being accurate. They are arranged in five classes, and nearly in their order of ripening. The first class are summer pears; the second early autumn; the third early winter; the fourth late winter and spring; and the fifth baking varieties.

Summer Pears.

1. *Petit Muscat P.*—Ripens about the middle of July. This fruit are produced in clusters; are nearly round, the stalk short; colour light green, fading off to yellow when ripe. The juice is of a pleasant musky flavour; and if gathered before they are quite ripe, as all this class of fruit should be, their quality is improved, and very fit for the dessert. The tree is of rather humble growth, but a good bearer, and a profitable sort for market gardeners, being always saleable so early in the season.

All the pears of this class being proper for standards and espaliers, may be worked on the common stock. The quince stock is most suitable for dwarfs, provided the kinds wished for will take on it, and provided the soil is also suitable; otherwise the trees on quince stocks will very soon fail.

2. *Citron de Carmes P.*—Ripe at the end of July.

This is the Madeleine of the French catalogues; it is also called the Magdalen or St. James's, from its time of ripening.

Hitt considered this to be what is called the green chissel, but without good reason; because that is a fruit of inferior quality; the citron de carmes being only second to the jargonelle.

The fruit are small, elongated, thickish near the stalk; colour light green, turning in some seasons to light red on the sun side. The pulp is melting, juicy, and pretty richly flavoured. The tree is an excellent bearer, the fruit growing in clusters. It forms a handsome standard of the third class, and very suitable for espalier training. The green chissel, above alluded to, is much cultivated for its earliness by market gardeners. Miller describes it under the name of the poire hativieu, or the Hasting pear, commonly called the green chissel.

3. *Gros Blanquet P.*—Ripe from the beginning to the middle of August. A good serviceable fruit: full middle size, nearly round, tapering a little towards the stalk, which is short and thick: skin smooth, pale green dashed with faint red, turning yellow as it ripens. The pulp is mellow, juicy, and well flavoured. The tree is healthy, and ranks in the third class in the orchard, and it is suitable for espalier training.

There are two other sorts of blanquets, viz. the small fruited, and the long stalked. They are equal in qualities with the above, but inferior in size; they are, however, suitable for the market gardener, as

their growth is very upright, and occupy but little room.

4. *Musk Robine P.*—Ripens at the beginning of August. This variety is valued for its fine musky flavour, both in this country and in France, where it has the additional names of the queen's pear, amber, &c. The fruit are small, nearly round ; colour, light yellow, deepening as it ripens ; pulp melting, juicy, and of a good flavour. The tree belongs to the second class ; is a good bearer, and ripens so rapidly, that it requires watching to have it in perfection. It makes a very good espalier.

There is a small pear which ripens in the beginning of August called the lammas ; it is a hardy tree, and an excellent bearer, and, consequently, a profitable sort for the market gardener and cottager. In Leslie's Edinburgh catalogue, it is called the Crawford or Bancrief, and recommended for its earliness and prolificacy.

5. *Windsor P.*—Ripe from the middle to the end of August. This is a variety of English origin, having been raised from a seed of the cuisse madam, by a person of the name of Williamson, a relation of Williamson, whom Grimwood succeeded in the Kensington Nursery.

It is a fruit of little value for the dessert, but a profitable one for the market. The fruit are large, swollen in the middle, tapering abruptly towards the eye, and tapering to a point at the stalk. It is often mistaken for the cuisse madam, but the latter is more truly pear-shaped, that is, very much swollen

near the eye, and also somewhat more swollen close to the insertion of the stalk. The colour of the fruit, and manner of growth, are much alike; but the Windsor is by far the best fruit. They are both trees of the first class in the orchard, attaining to a large size, and when grown there, are pretty good bearers. Their seeds produce excellent stocks for grafting standard high. The fruit are best if gathered before they are ripe; and they come into bearing sooner if planted on a dry warm soil.

6. *Jargonelle P.*—Ripens from the end of July to the beginning of September. In French catalogues this excellent summer pear is made to change names and qualities with the *cuisse madam*. How this misnomer has happened, is a matter of no importance, so long as neither the trees nor fruit are sold for each other.

The fruit of the *jargonelle* are long and handsomely pear-shaped; largest about one-third (of the whole length) from the crown, and pretty gradually tapering to the stalk, which is also long. The eye is large and open; the skin is rather thick, of a russet green colour next the sun, and iron green behind. The pulp is mellow, full of fine rich musky juice.

The tree is an early and prolific bearer; and, with the treatment it requires and deserves, may be made a beautiful and most profitable tree. It is certainly the best of all our summer pears; and when trained on a wall, or as an *espalier*, the fruit arrive at a very large size.

The tree, however, requires a great deal of management to have it in proper form, to keep it healthy and fruitful. The soil most suitable for it is a light hazel loam, rather shallow than deep, and on a hard, dry subsoil.

The author could give a very succinct account and history of a jargonelle pear tree, which he had the management of from the year 1779 to 1789, as proof of the tractableness and prolificacy of the kind ; but as he fears this would be tedious to the reader, he will content himself with briefly stating, that a young standard tree was planted, in the first-named year, upon the side of a dwelling-house having a due south aspect. Lateral branches were trained right and left, and a central upright was led zigzagly upwards, to form horizontals to cover the spaces on each side of the central stem. In the third year from planting, the tree began to bear. In the fifth year, thirty dozens were gathered. In the seventh year, the tree yielded nearly fifty dozens. In the ninth summer, the crop gathered amounted to nearly fourscore dozens, an immense return for so young a tree.

In the training of this tree the knife was but little used, except when additional shoots were wanted to fill up : all redundant, foreright, or misplaced shoots were rubbed off as soon as they appeared. By these means every branch and shoot soon became covered with fruitful spurs ; and no portion of the strength of the tree was wasted in the production of useless growth, the whole being directed into the desired

channels, and to the support of the crop and leading shoots only. The whole system of the tree was so prolific, that flower-buds were often formed on the points of the leading shoots and laterals ; and these were preserved, on account of their powers of yielding the largest fruit. Thinning the fruit was always attended to ; for no tree should be allowed to weaken itself by too heavy a crop in any one year, as this gives such a check as is not soon recovered. The thinning should be done early.

The successful culture of this tree is entirely to be attributed, first, to the soil it was planted in being neither too rich nor too poor ; neither too deep nor too moist, too shallow nor too dry ; to the care bestowed in keeping the head rather thin, and equally balanced with the powers of the root ; to stopping, *in the bud*, all irregular or unnecessary growth, and careful thinning of supernumerary fruit. This management every young fruit tree requires, whether planted on walls or espaliers, or as dwarfs or standards in the open ground ; and whether jargonelle or any other sort.

In some parts of the country there is hardly a healthy jargonelle tree to be seen : whether on walls or in the open ground they are cankered and unthrifty, producing large unkindly shoots in summer, which usually die off in the winter, and rarely bearing a single fruit in perfection. The unhealthy state of these trees may be traced to over-deep planting in a rich deep loam or clayey soil : their growth is too luxuriant, the wood never being thoroughly

ripened before the frosts of winter set in to destroy it. Such trees are best rooted out and thrown away.

The jargonelle takes on the quince stock, but the trees prove very short-lived. To correct the natural luxuriance of young trees, a dwarfish-growing stock is to be chosen ; and perhaps those raised from the most diminutive-growing varieties of pears would be most suitable : or double working them on less luxuriant growers might answer the purpose.

The writer has drawn out this account of the jargonelle at some length, not only because it is one of our best pears, but because the generality of writers just describe the tree and fruit, but omit all directions for subsequent management ; without a knowledge of which, no cultivator can either grow the tree, or have the fruit in perfection.

7. *Muscadelle Rouge P.*—Ripe about the middle of August. This pear is also called *La Bellissime* by the French gardeners. The fruit are full middle size, swollen near the eye, and tapering towards the stalk, which is long and slender. The colour bright red towards the sun, and yellow where shaded. The pulp is melting, juicy, and well flavoured. This variety takes and bears well on the quince stock ; and one tree of it in a collection is very well, for the sake of variety, as it only remains for a day or two good. The old Catherine pear of our market gardens ripens about the same time with this ; and, as they are both great bearers, are profitable sorts for a quick and certain demand.

8. *Rousselet de Rheims P.*—Ripe the beginning of September. The fruit are small, pyramidal shaped, tapering off to a short thick stalk; colour brown, and yellowish when ripe; the pulp is melting, has but little core, very juicy, and of an agreeable flavour. The tree forms a good standard of the third class, is hardy, and a prolific bearer; and is a good second-rate summer fruit.

9. *Muscat d'Aoust P.*—Ripens, as its name imports, in August. It is also called *roi d'Eté*; and, when first cultivated in England, was called Robine; but different from and much better than the variety called musk Robine, with which it should not be confounded. The fruit are small and depressed, like a bergamot; the stalk long, straight, and a little spotted. The eye is small and hollow; skin is smooth, and of a whitish yellow colour; pulp breaking, juice rich, and of a perfumed flavour. The tree forms a standard of the second class, and is an abundant bearer, whether in the orchard or in the garden as an espalier. This takes on the quince stock, but it is much better on the common stock in this country. Miller praises this pear highly; but it appears to have degenerated in quality since his time, though even now it may be presented in the dessert.

10. *Summer Rose P.*—Ripe from the beginning to the middle of September. The fruit are large and round, hollow at the stalk, which is short; the skin rough and brownish; flesh melting, and full of sweet juice of a peculiar flavour. The tree is hardy, a

good bearer, and forms a handsome tree of the second class. This sort takes freely on the quince stock, and of course does well for dwarf training.

11. *Orange Musquée P.*—Ripe the beginning of September. This is the orange bergamot of English gardens. The fruit are middle sized, round, light green, and turning yellow when ripe, with russet spots. The pulp is partly melting, not very juicy, but admired for its musky flavour. It is but a middling bearer, and does better as an espalier or on a wall than as a standard.

There is a pear of late introduction, called the summer Crasanne, which promises to be a useful summer fruit trained as an espalier, and perhaps is to be preferred to the above.

12. *Bergamot d'Eté P.*—Ripe the beginning and middle of September. The fruit are middle sized, but become less as the tree increases in age; hollow at both ends; stalk short, eye small, colour greenish russet, yellower when ripe. The pulp is melting, juicy, and richly flavoured. This, like its kinsman the autumn bergamot, forms a fine standard of the first class; healthy, and, after a few years' growth, becomes a good bearer, if in a dry, thin soil. In rich, deep land it is much longer in coming into bearing. By some nurserymen this variety has been worked on the quince; but the practice is not to be recommended, unless the trees are intended for a very strong soil.

An early bergamot has been lately introduced by the Horticultural Society, which promises to be a

useful fruit. If it proves what has been said of it, it should be in every nurseryman's hands.

13. *Bon-Chrétien d'Été P.* — Ripe from the beginning to the middle of September. It is the largest, and, if not the best, it is certainly the most beautiful of the summer pears. It is swollen near the eye and stalk, and somewhat contracted in the middle; the stalk is long and slender; the eye large and open; the colour next the sun, fine red; on the opposite, whitish green. The pulp white, of middling consistence, and full of rich perfumed juice. The tree blooms early, and if the blossoms be not defended from frost, they are apt to be cut off; hence the tree has acquired the character of a shy bearer, which it really does not deserve if seasonably protected. The tree resembles the jargonelle in habit, often producing long curved shoots, often tipped with flowers, and therefore requires to be trained in pretty open order. It takes freely on the quince; but where there is plenty of wall room, it is better on the common stock. It is altogether unsuitable for a standard in the open ground, its dangling growth keeping it too near the surface.

14. *Williams's Bon Chretien P.* — Ripe soon after the beginning of September. This is an English variety, having been raised in Berkshire, and propagated by Williams of Turnham Green, and thence into the market gardens around, and for which it is well calculated. On its appearance in Covent Garden Market, it received its name from the late Mr. Grainge

of that market, and which it has been known by ever since.

The fruit are full middle size, of a long irregular shape; the eye prominent; stalk, short and thick; colour, mixed light and dark green, with a little reddish russet next the sun; the whole yellowish when ripe. The pulp is melting; juice plentiful, sweet, and pleasant. The tree is healthy, a good bearer, upright in growth, and forms a standard of the second class. From every planter it has received a good character, and is now an established sort.

The fruit are better for being gathered before they are quite ripe: lying in the fruit-room a few days improves their flavour.

Early Autumn Pears.

15. *Autumn Bergamot P.*—Ripens beginning of October. It is allowed to be not only the best pear, but by good judges is said to be the best fruit produced in England. The fruit vary in size, according to the soil, situation, and season; nearly middle size; flattened at both ends; eye small and hollow; stalk short and thick. The colour a russet green, in some seasons tinged with a little red. The pulp is melting, the juice plentiful and uncommonly rich, equal to that of any other pear. It well deserves a wall, or as an espalier, and bears well on a standard after the tree has got to a fair size.

The best stock for the autumn bergamot is the common; the grafts take on the quince, but the trees

soon die off. The fruit remain about a month in season : but they require to be laid very thin on the shelves of the fruit room.

A Scotch pear, called the muir-fowl egg, has been confounded with this, but they are very different.

16. *Bergamot de Suisse P.*— Ripens end of September. The fruit are full middle size, somewhat rounder than the last, and more contracted at the eye, which is small and hollow. The skin rather thick, green striped with faint red, but yellow when ripe. The pulp is melting, juicy, but not high flavoured. The tree forms an upright standard of the first class, and is an excellent bearer. It takes on the quince, but does best on the free stock.

17. *Swan's Egg P.*— Ripe end of September. The fruit not quite the middle size, oval, thickish near the stalk, which is short and slender ; eye small and prominent ; colour, a russet green ; skin, rather thick ; pulp, between melting and breaking, full of sweet high-flavoured juice. The tree forms a fine conical-headed tree of the first class, almost always healthy, and in favourable seasons a good bearer. It does not succeed on the quince, but on any free stock. Stocks raised from swan's egg seeds are very suitable for many sorts of pears.

18. *La Doyenne P.*— Is the Dean's pear ; but better known by the name of the white beurré, and which is usually ripe about the end of September. The fruit are large, enlarged towards the eye, and tapering bluntly to the stalk, which is rather long and thick. Colour darkish white, and slightly brown

next the sun, yellower when ripe. The flesh is melting and juicy, and keeps but a very short time after it is gathered. However, as the tree is hardy and a good bearer, it is worth the market-gardener's notice, if he has a sheltered situation for it, as it is very liable to suffer from storms when loaded with fruit. It forms a handsome tree of the second class. For espaliers, it may be grafted on the quince and double worked.

19. *Verte Longe P.*—Otherwise called the mouth-water, by Miller, and ripens in October. This is a large fruit, of a pyramidal shape and deep green colour, which it retains after ripening. The pulp is melting and juicy, and the flavour sweet and agreeable. When worked on a free stock, it forms a handsome standard of the second class. If worked on the quince, and planted in a dry soil, it soon fails; if on a strong soil, it lasts longer. The fruit sometimes keep for three weeks after gathering.

20. *Sucre Vert P.*—The green sugar ripens in October. The fruit are full middle size, and handsomely formed, tapering to the stalk, which is short and thick, the eye small, and colour green. The pulp is melting, but a little gritty at the core, and, according to Miller, much more so if grafted on the quince; the juice is plentiful and agreeably sweet. The tree forms a fine healthy standard of the second class, is hardy, a good bearer, and altogether is a good serviceable fruit, keeping for about a month after it is gathered. Its colour is its only defect in the market, buyers being fonder of rich or coloured fruit.

The original tree of the green sugar pear stood in an old garden in Fulham, and was propagated and distributed far and wide by the then proprietor of the Fulham Nursery, Grey. That ground was a source from which many of our best orchard and garden fruits now in vogue were circulated; and not fruits only, but some of the most valuable ornamental exotics. Mr. Grey gave up a small portion of ground for the reception of the hardy plants and seeds brought home by his intimate friend, Mark Catesby, Esq. the celebrated botanist and traveller. On this spot the first plant of *Magnolia grandiflora obtuse* was planted, prospered, and flowered in the greatest perfection. It served as a stool (having a stage erected round it), whence numerous layers were made for twenty years before it died from this continual mutilation. One of the first layers was removed to a sheltered spot in the nursery, and flourished so well as to be a half standard ten feet high in 1791: three years afterwards it had above seventy perfect flowers on it at one time, and was a most beautiful object, and admired by all who saw it; but in three years afterwards it was entirely destroyed by a sudden and severe frost. The reader, it is hoped, will excuse this digression as having nothing to do with fruit trees; but the idea of both are so associated, that he could not speak of the culture and propagation of the green sugar pear, without alluding to a most beautiful plant which was propagated at the same time and place.

Gansel's Bergamot P.—Ripens about the beginning

of November, sooner or later according to the season, and keeps from three to five weeks in the fruitery.

The fruit are full middle size, regular roundish shape, like the autumn bergamot, but not so flat at the stalk, which is short and thick. Colour light brown, deepest on the sun side ; the whole yellowish when ripe. The pulp is mellow, juicy, and well flavoured ; and is certainly a most excellent fruit when well ripened.

The habit and growth of the tree is like its parent, the autumn bergamot, from a seed of which it was raised, by a Colonel Gansel of this county. It is also called, or rather miscalled, Brocas's bergamot, from a person of that name, a nurseryman at Cheshunt, Herts, who knowing something of its origin, gave it surreptitiously his own name.

Though the tree forms a handsome standard of the second class, it should always be a trained tree, the weight of the fruit rendering it unfit for exposure to the wind. The tree is but a shy bearer till it becomes aged ; and then the fruit are much smaller. The finest crop of this fruit the author ever saw, was from it being worked on a swan's egg pear, which was previously lopped for the purpose. And here the writer would observe on this instance, and many similar instances which he has been witness to in his practice, that many improvements may be made in double and cross-working pears and other fruit, to correct the luxuriance or debilities of each other. It has been stated by some authors, that " this pear is much too tender to bear as an open standard in

any part of England, nor does it succeed as an espalier." This, however, is a mistake; as the author could prove by appealing to many instances within his immediate knowledge. It is true the tree is not an early bearer, nor perhaps ever a great bearer; but it is no less true, that when arrived at mature age, it is as fruitful as many others of our finer sorts of pears.

It has also been reported of this pear, that the male parts of the flowers are somehow defective, and that impregnating the stigmas with the flowers of any other congenial sort, as the autumn bergamot or swan's egg, remedies the natural defect. This is a rational assumption; and the writer has no doubt of its efficiency, because we see similar effects among other plants; and at any rate is well worthy a trial.

Beurré Rouge P. — The red butter pear; ripens about the beginning of October. In this country it is better known as the beurré de roi. The fruit are large, long, swelling much from the eye, which is small, and tapering bluntly to the stalk, which is short and thick. The colour is brownish yellow, tinged with red next the sun, hence the specific name; skin thin, pulp buttery, and full of fine, high flavoured, excellent juice.

This fruit has, by Miller and his copyists, been identified with the beurré gris of the French, or brown beurré of the English nurseries. But they are perfectly distinct, as will hereafter be shown. This takes readily on the quince stock, and if planted in a strong moist loam, will make good trees; but

the common stock is to be preferred for a thin light soil.

In gathering this pear, as well as the preceding, much care is necessary, being easily spoiled by rough handling. The fruit should be laid on their crowns singly, on dry moss on the shelves in the fruit room, where dry air free from frost may circulate.

23. *Beurré d'Angleterre P.*—This is our brown beurré, and ripens about the same time as the last. The fruit are not so large as the foregoing, but of a more regular shape. The colour is dark brown, seldom tinged with red, but becoming yellowish when ripe. The skin is rougher than the preceding; the pulp tender, melting, and fully charged with pleasant, in some seasons rich juice. If in a suitable soil, the tree grows healthily, and bears well; but if in damp, deep ground it is liable to canker. This and the beurré de roi are usually planted against walls or trained as espaliers; and in warm, sheltered situations do very well as standards of the third class.

24. *Le Marquese P.*—Ripens end of October. Is a pear of second-rate quality. The fruit are full middle size, of a handsome shape, largest near the eye, which is small and hollow; tapering to the stalk, which is short and thick; colour greenish yellow, with a slight blush of red on the sunny side; the whole yellowish when ripe. The skin is smooth, containing a half-melting pulp, charged with a sweet juice.

Marie Louise P.—Ripens about the middle of

October. This is a lately introduced variety to English gardens. The fruit are full middle size, long, and handsomely shaped, swelling regularly from the eye, which is broad and shallow, to the stalk, ending abruptly and rather unequally round it. The general colour is a brown russet, with patches of greenish yellow. Skin thicker than the *beurré de roi*: pulp melting, juice abundant, sugary, and high flavoured. It is one of the best of the season; but not, as it has been said to be, one of the best of pears.

The writer has not found it answer well on the quince stock; and thinks the common stock more suitable. As a bearer, it is highly spoken of by the late Mr. Braddick, who recommends it for walls, espaliers, or standards. For the latter purpose it may succeed in the neighbourhood of London; but the author doubts whether it will answer in the northern provinces.

There is, it seems, another Marie Louise, of far more tender habit and less calculated for this climate than the first, and which Mr. Braddick warns planters not to be deceived by. And it would appear, that both sorts are in this country; for while Mackintosh declares, that the Marie Louise will not ripen unless on a south wall, the Horticultural Society's Catalogue represents it to be perfectly hardy enough for a standard or north wall.

26. *Bishop's Thumb P.* — Ripens towards the end of October. This is an old variety, having been mentioned by Gerrard about the middle of the six-

teenth century. The fruit are below the middle size, very irregularly shaped, being bent in the middle, blunt at both ends, and nearly equal. The stalk is long and slender; the eye small and open: colour dark russety green, deepest on the sun side. The pulp is melting, juicy, and of rather superior flavour. The tree is healthy, hardy, and a good bearer. From the uncommon form of the fruit, had it no other good properties, it deserves a place in every collection.

There is another pear which ripens at the same time with this, *viz.* the Messire Jean, of which a great deal has been said for and against; but it is generally set down as an inferior fruit; being, although charged with a sugary juice, very gritty.

27. *Beurré Spence P.*—Ripens from the middle of October to the middle of November. This is another lately introduced pear, highly commended by Mr. Braddick. The fruit are about the middle size, and of a handsome pear shape; stalk short and rather large; eye large, but not hollow. The colour is lightly red next the sun; brown and yellow behind. The pulp is yellowish, very melting, juice rich and finely flavoured. According to Mr. Braddick, it is a good bearer either on espaliers or standards.

It takes freely on the quince stock, which renders it more convenient for small gardens; and on the common stock will probably rise to a tree of the first class in the orchard. It is strongly recommended to market gardeners, as a sort well worth their attention.

Another pear, called the Seckle, which ripens about the same time, has lately been introduced from America, and of which many extravagant and very contradictory accounts are given: one praising it for its high scent, being a good bearer, and adapted for any situation; while another asserts, that it will only ripen on a south wall. If, however, it has half the merit ascribed to it, it is well worth cultivation.

Late Autumn and Winter Pears.

28. *Duchess d'Angouleme P.*—Ripe about the beginning of November. This is the third of the new Flemish pears cultivated by the author, and he has found it one of the very best of its season. The fruit are large, oblong, and swelling most near the eye; diminishing somewhat bluntly to the stalk, which is short and thick. The eye is small and deep; colour brown and yellow, deepening as it ripens. The flesh is melting, abundantly juicy, and of excellent flavour. This variety is famed for early prolificacy, taking freely on the quince as well as on the common stock; but on the former it comes sooner into bearing. It forms a fine healthy tree, either against a warm wall, where it ripens best, or as an espalier in a warm situation.

The author gathered from a tree on a quince stock, in the third year from the graft, a fruit which weighed above fourteen ounces, and which was presented to the Horticultural Society of London, by whom it was much admired, and who returned a vote

of thanks for the same. From the uniform success of the Flemish gardeners, and those of the isles of Guernsey and Jersey, in growing this and other pears of similar character, the author supposes it ascribable to the very fine rich, moist loams found on all their levels; and therefore advises, that, in the formation of borders or composts for this pear, the same should be imitated.

29. *Crassane P.*—Ripens between the end of October and middle of November. This pear has always been held in high estimation, being equal, if not superior, to any of the early or late winter sorts. It is full middle-sized, round, bergamot-shaped. The eye small and hollow; stalk short and slender; colour a light russet, turning yellower in ripening. The pulp is tender, melting, juicy, and of exquisite flavour. The tree is healthy, forming long and rather slender shoots, requiring a wall and good aspect, either south-east or west, the former preferable. Fruit produced on a north-west aspect are said to keep longer than those from warmer aspects.

The most proper stock for the crassane, is the common pear stock. It takes readily on the quince, and for a few years grows well; but afterwards becomes feeble and rather stunted. Complaint is made, that this tree is long barren in its youth, which is certainly the case if on a free stock; but even on this its barrenness may be corrected, by shallow planting on a hard and impenetrable bottom. The author has often had to raise trees, injudiciously planted too low in highly-manured deep borders, to

make for them an artificial bottom of hard gravel or stone, and which never failed to induce moderate growth and fruitfulness.

30. *Napoleon P.*—Fit to gather about the middle or end of November. This sort, worked on the quince, is early fruitful; but where there is wall room enough, it is better on the free stock. The fruit are large, irregularly long, thick towards the stalk, which is short and also thick. The eye is small and shallow; general colour green, which changes but little in ripening. The pulp is melting, juicy, and finely flavoured; keeping, in some seasons, for three months after being taken from the tree.

The tree is vigorous, and does well on an east or west wall: being at the same time a good bearer, it deserves a place in every garden.

31. *Aston Town P.*—Fit to gather in November and December. This is an excellent little pear, and, from all accounts, has been long known in Cheshire. It was not known about London in 1780; but was afterwards extensively propagated by Hewitt and Grimwood, and highly recommended by the late Mr. Grainge, of Covent Garden. The fruit are middle sized, roundish, though diminishing to the stalk, which is long and slender; the eye small, and slightly inserted; colour light green, intermixed with russet. The skin thin and roughish; the pulp soft, melting, and full of fine-flavoured juice, approaching to that of the crassane.

The tree rises to be one of the first class as a

standard, though its long and flexible shoots require some care on its first going off. It makes a beautiful espalier or wall tree on a west aspect, and is in every situation a good bearer. Its favourite soil appears to be a sandy loam on a marly bottom.

32. *Bonne Louise P.*—Fit to gather about the first of November, and keeps good for five or six weeks, according to the season. The fruit are full middle sized, shaped like the autumn vert longe, only not so contracted at the stalk, which is very short, thick, and somewhat bent. The eye is small, so also are the flowers; skin smooth, green, turning to a whitish yellow when ripe. The pulp is melting, juicy, and of an agreeably sweet flavour. The tree is healthy, though not vigorous; but does well on a west wall or espalier, in dry sheltered situations. In Jersey it is called *Louis Dix-huit*, where it is grown in great perfection. It is a good bearer.

33. *Echasserie P.*—Ripe from the end of November to Christmas. This is a variety of French extraction, and has been long in this country. The fruit are middle sized, rather oval, but more swollen towards the eye; the stalk is straight, long, inserted in a hollow; eye small; skin smooth, green with some brown spots while on the tree, afterwards yellow. The pulp very melting, abounding with a sweet perfumed juice. It is a healthy tree, but not a great bearer; and as the best fruit are produced from the spurs of the young wood, care must be taken to lay in as much of this as possible, and use the knife to produce it.

The echasserie takes well, and is soon fertile on the quince stock, where the space is limited and the soil heavyish; but better on the pear stock, if there be plenty of wall-room, and the soil light and shallow.

34. *Virgouleuse P.*—Ripe the end of November to January. Miller's description of this pear is correct; viz. — "The fruit are large, long, and of a green colour, turning to yellow when ripe; the stalk is short, fleshy, and a little bent; the eye of a middle size, and a little hollow; the skin is very smooth, and sometimes a little coloured towards the sun; the flesh is melting, and full of a rich juice." In habit the tree is vigorous, requiring, if grafted on a free stock, a greater extent of wall than other sorts of winter pears. On the quince stock the tree is more dwarfish, and therefore better calculated for small gardens or limited spaces. A south-east aspect appears to be the best for this pear. But wherever this tree is planted, no success will attend the culture if it be not placed on a shallow border of fresh sandy loam on a dry bottom; and if it be not allowed plenty of room to extend its branches. Confining it to a limited space by the knife, only renders it more luxuriant and more sterile. It should also be trained in very open order, for the sake of admitting air and light to ripen the young wood. It has been noticed by Quintynaie, a French author, that this pear is very apt to imbibe the scent of the wood on which they are stored; and therefore the writer advises that fruit-shelves should be made of scentless wood,

as Spanish oak; or if in jars, these should be glazed.

35. *Chaumontelle P.* — Fit to gather from the middle of November to the end of December. This pear has always borne a high character as a winter fruit, and is met with in most gardens. The fruit are large, oblong, and irregularly shaped, having several longitudinal ridges more or less conspicuous; the eye small and hollow; the stalk short, and deeply inserted. The skin is somewhat rough, purplish next the sun, and darkish green where shaded. The pulp is melting, but not so delicate as the beurrés; but the juice is plentiful and well flavoured. The tree forms a standard of the third class; but requires some assistance, when young, to keep its first dangling shoots upright. A common pear stock, and a place on a west wall, seems to be most suitable for it. Every care should be bestowed to keep this fruit as long as possible, for which ample directions have previously been given under Apple.

36. *Petite Beurré d'Hiver P.* — Or the small winter beurré, ripens about the end of November, and keeps sometimes to the end of February. The fruit are small and round, tapering bluntly to the stalk, which is very short, and deeply inserted. The eye small and inconspicuous. The skin is rough, and of a dull greenish yellow covered with many red spots. The pulp is of a soft buttery consistence, abounding with a rich and agreeable juice of a peculiar flavour. The tree forms a fine healthy standard of the second class in the orchard; and in Scotland, or the north of

England, it may require a south wall. The late Mr. Shepherd, of Chelsea, grew this pear in great perfection, and esteemed it a profitable sort for his brethren in the market line. The common stock is most proper for it.

37. *Beurré Diel P.* — Fit for use from the end of November till after Christmas. This is another Flemish pear, which the writer has cultivated from the graft to the fruit. The fruit are large, swelling most in the middle, and diminishing both ways. The stalk is short and thick; the eye small and sunk. The colour green intermixed with russet, covered with numerous brown spots, the whole turning to light lemon-colour when ripe. The flesh is very melting, and well charged with an agreeable high-flavoured juice. Suitable for the dessert.

The tree grows well, is hardy, and a good bearer on the quince stock. In warm situations it may answer as a standard: but will certainly answer on an east or west aspect, especially in parts far north of London. When intended for standards, they should be worked on free stocks.

There is a Scotch pear which ripens about the same time, called the winter Achan, highly praised by Leslie of Edinburgh. The fruit are middle sized; tapering rapidly to the stalk, which are also middle sized. The skin is smooth, of a dull brown colour nearly all over, with numerous grey dots. The pulp is melting, juicy, and of a good flavour. The fruit do not arrive at so great a perfection in the south of England, as they do in Scotland.

38. *St. Germain P.*—In use from November till the middle of January. This is an old English favourite, being found in most collections. The fruit are above the middle size, handsomely shaped, being somewhat lengthened out. The stalk is short and bent; the eye small and prominent. The colour yellowish green, skin roughish and rather thick. The pulp is melting and high flavoured, when well grown : it is altogether one of our best winter pears. The tree makes a fine wall tree, and is in general a good bearer. No tree thrives better in a light shallow loam on a dry bottom, and no pear is of less value if grown in deep, rich, heavy soil. The fruit becomes insipid, gritty, and not worth presenting at table. This variety is easily known by its green shoots, narrow leaves, which are somewhat reflexed at the edges, and by its small compact bunches of flowers. The tree is apt to produce distorted fruit, which should always be cut off along with all supernumeraries that may set.

Where there is room, plants on free stocks should be chosen; but for low walls, or confined spaces, the quince stock is the most eligible.

Late Winter and Spring Pears.

39. *Beurré d'Aremberg P.*—In season from the middle of December to the end of January, some years longer. This pear has been recommended by the late Mr. Braddick, and which is a sufficient guarantee of its excellence. The fruit are full the middle size, in shape like the brown beurré, but not

quite so much swelled at the base. The eye is small and shallow ; the stalk short and stout ; colour is first light green with a little russet, afterwards light yellow ; skin thin, the pulp melting, juicy, and well flavoured. On a wall, or as an espalier in a warm situation, it will succeed : and if trained in the curved manner it will sooner become fruitful. It is a rival of the Colmar, and to have it in perfection it should have the same culture as the other beurrés.

40. *Colmar P.* — Ripens in the latter end of November, and continues in use till March. On this account it is one of the most estimable of winter fruit ; being generally of a large size ; the eye is large and in a deep hollow ; the fruit largest in the middle ; stalk short, stout, and a little bent. The skin is smooth, dull green, with sundry yellow spots, and in fine seasons has a little colour next the sun, the whole turning yellow when mature. The pulp has all the qualities of a good fruit, melting, juicy, and richly flavoured. The tree raised on the pear stock is vigorous, requiring much room to extend itself, and should have the warmest aspect that can be afforded ; and if planted on a properly prepared border, it will prove a better bearer than it generally has credit for. Like some other sorts of pears, the Colmar takes readily on the quince, but the trees, though sooner fruitful, are not lasting, nor are the fruit so good, either for eating or keeping.

41. *D'Auch P.* — In use for the table, according to Forsyth, from December till April. The fruit are so much like the Colmar, that the description of one

may very well serve for the other. This, however, is rather broader at the base, and more bluntly terminated at the stalk. This also keeps longer, and comes rather earlier into bearing; and moreover in general a better bearer. For these last properties it has been in high repute: but it is questionable, after all, whether it equals the old Colmar in flavour. What has been said of the stock, and other matters relative to the Colmar, is applicable to D'Auch also.

42. *Passe Colmar P.*—Ripe during the two first months of the year. The specific name *passe* is not given to signify that it is superior in quality to the old Colmar; but from its hardiness, and prolificacy, either on standards or against walls. It, however, in this country requires the warmest aspect, as advised by Mr. Braddick. This pear is also called Chapman's, for what reason the writer does not exactly know, but he would beg to caution nurserymen not to imagine that there are two sorts.

The fruit are about the middle size, shaped like the old Colmar, but rather more flattened at the stalk, which is stout, and a little longer than its namesake; the eye is large but depressed. The colour dark green, a little russety, with a slight dash of red next the sun; the whole becoming yellowish when ripe. The pulp is mellow and richly flavoured. It forms a fine healthy tree; if for standards, one of the first class; but, as stated before, its proper place is a south wall. The proper stock is the common pear, on which it grows rapidly; how it will answer on the quince, the writer has not ascertained.

43. *Gloux Morceau P.*— Keeps from November to March. This is another French or Flemish variety, lately introduced, and though not so delicious as its name imports, yet it is a good pear, and worthy of cultivation. The fruit are large; the stalk deeply inserted; eye small and hollow; colour dull green, covered with numerous specks, changing but little in ripening. The pulp is partly melting, but not so much so as some others; juice tolerably abundant, and when thoroughly ripened on a wall no doubt rich.

Judging from the young trees now in training, it promises to be a vigorous grower; and if it prove hardy enough to rank as an orchard fruit, will be a great acquisition; but it is more than probable, that to have this pear in perfection, it must be placed among our wall fruit. In nursery training for standards, the head should be kept thin; otherwise there will be a head of fine wood, instead of a fine head of fruitful shoots.

44. *Royale d'Hiver P.*— The royal winter is in use during January and February. This pear is not noticed by Miller, though well known in his time. The fruit are full middle size, longish, in shape like the summer bon chretien, having a few ridges about the insertion of the stalk, which last is long and slender. The eye is small and hollow; the colour yellowish, with a little red towards the sun; the whole dotted with brown specks. The pulp is yellowish, partly melting, and charged with a well-flavoured juice. It does well on pear stocks; the

writer never having tried it on the quince. Were this pear better known, there is no doubt it would be more extensively planted than it is.

45. *Muscat d'Allemagne P.* — Fit for the table in March and April. The fruit are full the middle size, longish, russety, but reddish towards the sun. The stalk is slender and of middling length; pulp melting, tinged with yellow; juice not very abundant, but of a rich musky flavour. The tree forms a fine wall tree, and requires the warmest aspect; the shoots long and curving; leaves deep green, and slightly waved at the edges. The tree is a middling bearer; but its long-keeping property makes it a desirable sort, and should gain for it admittance into every collection. It takes readily on the common pear stock; nor does it appear that the quince stock would be proper, unless required to be planted in strong soil. These late pears should be laid gently in a heap for a few days after they are gathered; and before putting away on the shelves, or in jars, should be well wiped with a dry cloth.

46. *Lent St. Germain P.* — Fit for table during March and April. Duhamel has given this pear a higher character than it deserves when cultivated in England. The difference of climate is probably the cause. The fruit are full the middle size; some years large; much swollen in the middle, diminishing to the stalk, which is short and slender; the eye small and shallow, colour light green, but speckled all over with white. The flesh is half-melting, well flavoured, but not over juicy. These qualities, how-

ever, vary with the season, soil, and situation. It seems to abhor a quince stock, and is wholly unfit for any situation but a warm wall.

47. *Easter Bergamot P.* — Begins to ripen in the fruitery about the end of January, and continues good for four months afterwards. The fruit are large, nearly globular, but lengthened a little towards the stalk, which is short and thick, strongly inserted in the fruit. The eye and cavity round it small: general colour, green; skin rough, with brown tubercles, becoming yellow when ripe. The pulp breaking and partly melting, charged with sweet, agreeable juice. The fruit, however, are only passable under the best treatment: without a warm wall, a dry shallow border, &c. the produce are only fit for the kitchen. If the writer mistakes not, the tree is apt to produce flower buds on the points of the summer shoots; in which case they should be laid in, rather than cut off.

There are at present several other pears of a similar description to the above, but as none appear to be superior, and two or more identical with it, more experience is required before they can be so far recommended as either substitutes, or supplanters of the old sort. There is one exception however, *viz.* *Le Prince de Printems*, which being recommended by the late Mr. Braddick, demands on this account every attention of the British cultivator.

48. *Bon Chretien d'Hiver P.* — In use during the spring months. The fruit, when well grown, are very large; pyramidal shape, though not uniformly so:

the eye large, in a hollow; stalk short and strongly inserted; colour brownish yellow, deepening as it ripens, with a tinge of soft red on the exposed side. The pulp is tender, melting, and full of rich sugary juice, being altogether one of our very best keeping pears. What Miller has stated concerning the culture of this fruit is well founded, and has been often proved in the practice of the writer, *viz.* "I am fully persuaded," says Miller, "if this sort be grafted on a free stock, and planted in a good kindly loam, on a dry bottom, and against a south or south-east wall, with the branches at full length, it would be more esteemed than it has hitherto been in England." This was an early lesson for the writer, as he hopes it will be to every young planter who may read this memorandum.

Baking Pears.

49. *Double Blossomed P.*—In use from January to May. This pear, originally from France, has two good properties, it being both useful and ornamental. Miller says, "it is the best pear in the world for baking or comfits." The fruit are full the middle size; the eye is small; stalk long and straight; general colour green, becoming yellow when ripe, but retaining a dash of reddish purple on the sunward side. The skin is smooth and thin; flesh tender and juicy, and certainly a fine fruit for the oven. The tree belongs to the first class in the orchard, being of stately growth.

50. *Cadillac P.*—In use from December to April,

or longer. This is one of the best, for either the cook or confectioner, and has been long in this country. The fruit are large, and of great diameter near the eye, diminishing rapidly towards the stalk, which is short, thick, and strongly inserted in a shallow cavity; colour brownish yellow, with a red blotch next the sun; the whole yellow when ripe. This is a hardy and gross-feeding tree, very common about old farm houses, where it attains a large size. The tree however requires shelter, as the heavy fruit are liable to be thinned by the wind before they are ripe.

51. *Uvedale's St. Germain P.*—In use from December to May. This is the largest pear grown in this country, weighing sometimes from thirty to forty ounces. The fruit are of a long shape, greatest diameter near the eye, somewhat contracted about the middle, and tapering bluntly towards the stalk, which is short and thick. The eye is large and in a hollow: general colour dark green, intermixed with russet, and sometimes red tinted towards the sun. The skin is thin and smooth; and though not so high coloured when stewed or baked as the Cadillac, it is equally well flavoured. It forms a fine healthy tree, and of stately growth, but unsuitable for the orchard, by reason of the heavy fruit, which are shaken from the tree with the least puff of wind. As an espalier, or on an east wall, it well repays for the space allowed and care bestowed on it, as it is a good bearer, and equally serviceable in the second course of high cookery, as the more delicious pears are in the dessert.

The finest tree of this sort which the author had under his care, was a dwarf planted against a wall, and trained with two upright stems, whence horizontals were led curvingly to the distance of twenty-five feet on each side. The double stem and curved position of the branches caused early and constant fruitfulness much more certainly than if the stem had been single, and the branches straight.

These baking pears require free stocks, and a stronger description of loamy soil than other pears.

There are three or four other sorts of baking pears which the writer is acquainted with, *viz.* the livre or pound pear, black pear of Worcester, &c.; but they are all inferior to the three sorts described above.

Pears for Perry.

This class of pears need not be described, as they may be had from any nurseryman, if ordered by name. Everybody may rely on the opinion of Mr. Knight, as an excellent judge of such fruit, and who has recommended the following as of the best quality for the manufacture of perry; *viz.* the Barland, Holemores, Longland, Oldfield, and the Teinton squash. These are the sorts most in repute in Herefordshire, Worcestershire, and other perry-making counties in the West of England.

A few concluding remarks on the management of the pear tree, may end this section of the treatise. And, first, respecting the lopping or cutting back the branches of trained trees on walls or espaliers. It very often happens, that old trees bear no fruit

but at the extremities of the branches; and when these encroach on the trees on each side of them, either one or other requires removal. In this case the writer advises, rather than remove the pear trees, to prune the branches back to near the stem. From the bases of these, a new birth of young shoots will be produced; and which, if trained along to fill up the vacancy made by the removal of the old branches, will soon become fruitful, and, in fact, a renovation of the tree. When such a proceeding becomes necessary, it is best done gradually; that is, one-third of the branches may be cut back in one year, as many more in the next, and the remainder in the third year: this will be found better than cutting the whole back at once.

In the general management of pear trees, the author is fully persuaded that moderate growth, and consequent prolificacy, may be given, by paying attention to grafting upon proper stocks, planting in light and shallow soils, prevention of unnecessary growth by disbudding in early spring, and the least possible application of the knife; and, by avoiding deep, rich, over-moist borders, will together accomplish the wishes and expectations of the planter, and render unnecessary all those fanciful and contorted, or rather distorted, schemes of training, ringing, disbarking, &c., so much recommended by writers, and relied on by some practitioners. A tree may certainly, with proper treatment, be kept in moderate health and fruitfulness, without doing violence to either its natural habit or constitution.

SECT. XX.

OF THE PINE APPLE.

The early history of the introduction of the pine apple (*ananassa sativa* of botanists) into this country has been so often before the public, that it is unnecessary to go into any minute detail on this branch of the subject. Suffice it to observe, that the first plants cultivated in England were received from Holland; but whether first fruited in the royal gardens of the first or second Charles, in those of William and Mary, or in that of Sir Matthew Decker, of Richmond, is not clearly ascertained. There is no doubt, however, that, during the reign of William and Mary, many plants were received and distributed in this country, chiefly through the exertions of M. Bentineck, the progenitor and founder of the noble family of Portland.

The first houses built for the reception and culture of pines, were on the Dutch principle; *viz.* low close pits, warmed by smoke flues, and a bed of some fermenting material to place the pots containing the plants in. In the course of time, and as a better knowledge of the nature of the plant was acquired, houses of more ample dimensions, and far more commodious than low pits, were erected; and the culture of the pine apple soon took a systematic turn, and became a distinct branch of British horticulture.

As the plant, while it yields its fruit, also produces living progeny, these are to be nursed up with every care, and forced into their utmost amplitude in the shortest possible time. They are called crowns and suckers. The crowns are produced on the top of the fruit; and these, when nursed up, form the largest plants, and yield the largest fruit: but they require a longer period to bring it to perfection. The suckers are produced from among the lower leaves; and which, when separated from the mother plant, make the most convenient and soonest fruited plants.

In all that has been written by Kennedy, Speechley, and others, on the culture of this fine fruit, and from the long experience of the writer, there is one obvious rule of practice established, which should never be lost sight of or neglected,—namely, that, from the moment the crown or sucker is rooted up to the time its fruit begins to ripen, the plant should sustain no kind of check whatever. The growth should be, from first to last, a uniform progression, without pause or hindrance, in order that the plant may attain its utmost volume, and produce full-sized fruit in the shortest time.

As there are, during the process of raising the plants, different grades of them as to age and forwardness, different places are required for their culture: hence the stock of plants has been separated into two grand divisions; *viz.* fruiting and succession plants. For the first, houses are purposely

built, in which they yield their fruit and offspring, die, and give place to the next grade of successors. For the second and more numerous division of the stock of plants, there are also appropriate buildings, called succession houses. In these the second class of plants are cultivated, till they are fit to be removed to the fruiting house. The lowest order of plants are the young crowns and suckers of small size, and which are usually kept in frames on dung hot-beds.

From this account of the buildings and disposition of a stock of pine apple plants, the reader will easily perceive how they are forwarded from small to full-sized plants, and also how the different grades succeed each other in the different buildings erected for them. The grand object of the manager is to have, in the month of October in every year, as many full-sized plants as will completely fill the fruiting-house; for in that month the plants are shifted for the last time, and then are placed in their final stations.

Some former and able pine growers, particularly the early distinguished James Justice, Esq., of Creighton near Edinburgh, endeavoured to combine all the necessary buildings in one, by having what was called a *double house*; that is, a house of great width, the roof extending over two bark pits; that in front intended for succession, and the back one for the fruiting plants. This was imitated by Speechley at Welbec, and with great success. But it is generally found, that such large houses are not

so suitable for the expeditious culture of the pine apple as smaller houses, where there is greater command of heat, &c.

In Kennedy's, Speechley's, &c., writings on the management of the pine apple, it would appear that they tried too much to make a *seasonal* plant of it; that is, to grow the plants so equally, as that they should all show fruit and ripen together. Now this is neither natural to the plant, necessary in the culture, nor is it at all convenient for the table of the proprietor; because there is, under this management, a glut at one time, and a total privation at another. The plan, however, is no longer regarded so precisely by our best pine growers, many of whom would feel much disconcerted could they not provide a pine apple on any day of the year it might be called for.

With this deviation from Speechley's system of culture just mentioned, the usual process of growing pines is briefly as follows: *viz.* As soon as the crowns and suckers are separated from the old plant, they are stuck into the bark pit to strike root. When this takes place, they are immediately potted, and plunged among old bark on a dung hot-bed previously prepared for them. Here the heat should be as lively as that from whence they have been taken: here, too, they must be shaded when necessary; and, after they begin to grow, be frequently sprinkled with warm soft water. This will keep the air in the bed sufficiently moist; and great care must be taken to maintain a brisk heat at bot-

tom, by applying linings of well-worked dung. The effluvia or steam from well-worked stable dung is particularly grateful and nourishing to the leaves of the pine, and at the same time the best defence against all the insects to which the plant is subject. In the mean time the plants are advancing in size, and will require shifting into larger pots from time to time. The state of the roots in the pot always indicates when they require a larger size; and it should be considered, that the smaller the shift the better — that is, the new pot should just admit the entire, undisturbed ball, with a surrounding space of not more than half an inch to be filled up with fresh compost. This treatment is continued in hot-beds, and also during their passage through the succession-house, till they have gained their full size.

But during this progress there is a certain period, namely, in the beginning of March, when the plants may be subjected to what may be called a very unnatural act of cultivation: this is the practice of *dis-rooting*. Such a mutilation is supposed to be necessary, because the original ball of earth containing the roots must be by this time exhausted of most of its nutritive qualities, because old roots are useless to a new growth, and because the future growth must be supported by a new set of roots which will be produced from the joints above the place of those cut away. The succession plants are therefore, in the beginning of the above-named month, shook out of their pots, divested of all the old roots, and part

of the dead bottom of the stem also, together with a few of the bottom leaves. Thus trimmed they are repotted in fresh soil, and replunged in the bark-bed, which is also at the same time turned, and renewed by a fresh supply of new bark. Here the plants make a fresh start, and usually grow rapidly, in consequence of the assistance derived from the new roots, the fresh soil, and renewed temperature of the bed. In repotting pines, they should always be placed deep in the pot, for the reason alluded to above, *viz.* that the new roots being produced higher and higher up the stem, they should be invited to come forth by the compost being raised above the bottom of the leaves. At this disrooting season it should be considered whether a few of the strongest may not be required to come into fruit before the rest in the following season; and if so, these must not be shook out of their pots, but only shifted into larger ones without mutilation of any kind. Such will start into fruit sooner, but the fruit will be small sized.

The succession plants thus shifted and placed for the summer, will advance prosperously if the bottom heat be enough (from seventy to eighty degrees Fahrenheit), the temperature of the house never below sixty, and always rather moist than dry. In very hot sun-shiny weather, shading is often very serviceable to pine plants; and at such times the paths, flues, &c. as well as the plants, should be frequently sprinkled with water. Such management regularly bestowed, with daily supplies of fresh air,

will cause a robust stocky growth, and put them in prime order to go into fruit pots in October.

Some pine growers use no succession house, raising all their plants to the fruiting size on dung hotbeds. This is not a convenient plan : but where there is a command of means it is a very successful one, the plants being got up into a fruiting bulk in a comparatively short time.

At the last shifting, the plants are removed into larger pots, filling round with fresh compost ; the bark turned, receiving a supply of fresh, and the plants replunged therein. If there be fear that the heat will rise too strong, the pots should only be let in half their depth, and as the heat subsides, be either plunged to their full depth, or have the surface among the pots made up by fresh bark. The same may be required in the spring, to enable the plant to perfect the fruit, and which also very much assists to strengthen the suckers.

Trials have been made to grow pines on shelves, instead of plunging the pots in beds of bark or leaves, and the plan has partly succeeded ; but it must be a slower process ; and unless the air in the house be kept very moist, and of equal temperature, the roots close to the sides of pots must often be injuriously affected. Pines have also been grown without pots, in a bed of earth over a steam chamber ; good fruit have been produced in this way, but it is a troublesome plan, and without any advantages.

Next to the proper treatment of pines as far as regards light, heat, air, moisture, and situation, pre-

serving them from the attack of insects is a material point. Whenever we see the plants growing healthily, there we seldom see insects; but if they become stunted or sickly, immediately do insects make their appearance. Many remedies have been advertised for the destruction of the different insects which infest pines; but the writer used but one, which he always found efficacious. This was nothing more than sponging the plants with soft water, to a gallon of which was put half a pint of tobacco liquor; and while yet moist, dusting the leaves with a hair-dresser's puff, charged with the following ingredients in powder, *viz.*

1 lb. Sulphur Vivum.

4 oz. Camphor fine powdered.

1 oz. Stone Vitriol ditto.

2 quarts of Soot finely sifted.

The whole to be well mixed, and kept dry in a jar closely corked when not wanted for use. After this application, the plants should be kept in moist heat for a few days, at the end of which time all the insects will have fled.

The best compost for pines, is equal parts of melon and cucumber soils mixed together; or, what will be easier understood, soft loam taken from under the turf of an old meadow or pasture, and mixed with half the quantity of good rotten stable dung. This laid together for a month or two, and turned and broken till all is intimately incorporated, will be fit for use: it should neither be sifted nor screened. The collecting and putting together many different

kinds of dung, and other substances, the writer has found of no manner of use. Light fresh loam enriched with rotten dung is all that is necessary.

In potting the plants, care should be taken that the pots be well drained with pot-sherds, and the bottom dusted with a little soot to offend the worms.

The best form of pots for pines should be deep, in proportion to their width; wide and shallow pots are not at all suitable. Even for fruiting plants, the pots do not require to be so large as many imagine; a pot of eight inches diameter, and nine deep, is quite sufficient for a queen pine.

Having made these general observations, there remains to be noticed the different varieties of this matchless fruit now cultivated in British gardens, viz.

1. *Queen Pine*.—This is the oldest, as well as one of the best of our sorts in cultivation. It is the most hardy, and most to be depended upon for a regular crop; easily distinguishable from others by its shorter leaves, and strong spines. The leaves are covered with a leprous mealiness, which insects appear to be fond of. The fruit are oval; colour deep yellow; pips prominent and pointed; pulp yellow, and full of a rich acid juice of a peculiar flavour. The fruit vary in weight according to cultivation, generally from two pounds to five, but very rarely the latter. A gardener named Griffin, cut in the year 1805, twenty-four queen pines, which weighed together *one hundred and eighteen pounds three ounces*, an amazing and valuable crop!

2. *Ripley P.*—Is the broad-leaved, or old Ripley, so called to distinguish it from other Ripleys, which are inferior sorts. The habit of this is much like the queen, and like it is an early and regular bearer. The leaves are broad, mealy, spreading, thinly set with spines. The fruit oval, more swollen in the middle than the foregoing. The pips prominent and pointed; colour both externally and internally paler than the queen, but has a very rich and plentiful juice. The average weight of this pine is about three pounds, occasionally above four.

3. *Brown or Black Antigua P.*—This is one of the highly valued sorts. The leaves are very long, narrow, and of a dark green, tinged with pale purple, and mealy; spines strong, pips broad and flat. The colour of the fruit is first very dark green, but changes to yellow in ripening. The pulp is pale yellow, tender, and abounding with juice of excellent taste and quality, especially if cut when beginning to change colour in the summer months; later in the season, it should remain till it is quite yellow. The weight of the fruit varies from four to six pounds, more or less, according to cultivation. This variety of pine is apt to produce suckers under the fruit; these with care make good stocky plants, but while on the stem they rob the fruit.

4. *Black Jamaica P.*—This is a very fine but late fruit, not ripening till winter, but even in that season it retains its flavour. The leaves are very like those of the black Antigua, but rather less keel-shaped. The colour of the fruit is first dark brown, becoming

yellowish in ripening, and when full swelled. The shape pyramidal ; weight from three to four pounds, more frequently the former. The pulp is compact, and though less succulent than some others, it is much esteemed for its fine rich flavour.

This variety of the pine requires a greater degree of heat than most others, and if not kept up, from the time it shows fruit till it is quite ripe, becomes contracted near the crown, so as to deform and render it unsightly.

The late ripening of this, and a few other varieties, has suggested the propriety of having a subdivision of pinery laid off for, and appropriated to these slow-fruited and late sorts ; and which would certainly be better than mixing them indiscriminately, or even having them at one end of the same pit. In this, and in some other particulars, there is yet room, notwithstanding all our late improvements, for further amendments in hot-house building.

The black Jamaica produces fine suckers, and which often emit roots before they are separated from the parent stem ; and though these make fine stocky plants, neither they nor the crowns can be forced to produce fine and perfect fruit before the third year ; sometimes, indeed, not till the fourth year. A “ new black Jamaica ” has been lately introduced, which is much cultivated and esteemed in the West Indies : if it be found to excel the old sort, it is well worth looking after.

5. *Brown-leaved Sugar Loaf P.*—So called to distinguish it from another variety, having somewhat of

a striped leaf. Of the brown-leaved, this is decidedly the best. The leaves are long, hollow, of a dark green colour, and finely indented on the edge. The fruit is elegantly pyramidal; average weight about four pounds; colour pale green, gradually turning yellow on ripening. The flesh is yellow, firm, abounding with a quick acid but rich juice of exquisite flavour. The pips are large and flat; and when these yield under the pressure of the finger, the fruit is in perfection, and much better than if dead ripe. This also is a late ripener, and on that account useful as a succession sort. It has been long in England, being described by both Miller and Justice.

6. *Montserrat P.*—The leaves rather long, hollow, keel-shaped, of a glossy dark green colour, and finely indented on the edges. The fruit is somewhat oval, and much swollen in the middle; colour a yellowish brown; flesh also yellow, melting, and full of well-flavoured juice. Average weight three pounds. This variety often ripens its fruit in winter, and is then as well-flavoured as some others are which ripen in summer. It may also be kept for a considerable time before it decays.

7. *Havannah P.*—This is a second-rate sort. The leaves are remarkable from being spineless, except a few near the points, their colour light green, verging to brown at the bottom. The fruit is oval, with broad pips, resembling the Montserrat, dark at first, but afterwards changing to lemon colour. The pulp is pale yellow, with a tartish flavour, requiring a little sugar when eaten. When the plant is well

grown, the fruit sometimes weigh five pounds ; but a pound and a half less is nearer the average. This sort does not readily produce suckers ; the crowns should therefore be carefully preserved ; and though these do not fruit so early as suckers, they make much stronger plants.

8. *Enville P.*—This fine variety originated at Enville, a seat of Earl Stamford's, in Staffordshire. It was unknown to Speechley, as it is not noticed in his treatise. The leaves are large, and mealy ; spines not so strong as some others. The fruit are large, being of a handsome oval shape, a little flattened at top. The pips are large, and not so flat as those of the Antigua. Colour when ripe, orange ; the pulp yellowish, very melting, juicy, and highly-flavoured. Average weight between three and four pounds.

This is certainly one of our best pines, but it requires a high temperature, and twelve months longer time to bring it to perfection. It has also the property of keeping good a week or ten days after it is cut, and much longer if kept on the plant in a cool part of the stove. There is another called the new Enville, of which the writer knows nothing but from report ; the fruit is said to be larger.

9. *Silver Striped-leaved P.*—This and another called the striped Surinam, are cultivated more for curiosity or ornament, than for their value as fruit plants.

The foregoing are the pines which the author has cultivated (except the Surinam), and which he can recommend according to the description given of

them. Were he called to name a collection of these fruits, which would be at once profitably and easily cultivated, he would only mention four, namely, the Queen, Ripley, Sugar Loaf, and Antigua, as comprising every excellence to be found in this family of plants. For though there may be many varieties, or pretended varieties, advertised in nurserymen's catalogues, none will be found superior to the above four.

There are several other pines in cultivation in private gardens, which the author is only acquainted with from report. One called the white Providence is remarkable for the great size of the fruit, which by several cultivators has been grown to the weight of from ten to fourteen pounds !

Another sort, called the Anson or Otaheitan, is an admitted excellent sort ; and according to the very successful cultivator of it, Mr. M'Murtrie, is an admirable fruit, and deserves to be in every collection. In some catalogues we find both the Anson and the Otaheitan ; thus giving the same fruit a double name, which can serve no good purpose, and only cause disappointment.

SECT. XXI.

OF THE PLUM.

The plum is the *prunus domestica* of botanists, so called in contradistinction to the wild sorts, viz. the sloe and bullace, found in our woods and hedges.

We are indebted to our neighbours, the French, for the greater number of the domesticated sorts now in cultivation, and which are about to be described.

The proper stocks for working them on, are the common plum, and the Brussels stock; the former for dwarfs, and the latter for standards.

The soil advised for the apricot is also suitable for the plum; indeed, the latter is not very nice as to soil, provided it is neither sheer sand, nor over strong loam or clay. In planting, the same particulars advised for the apricot are to be observed.

In training the plum, the fan method is the best, especially on walls; because as the best fruit are produced on the young wood, an annual supply of this should be laid in; and which is easier done by fan training, than in any other way. Some few may be trained horizontally, but they will be noticed in the descriptions.

Standard plum trees require little or no pruning after their first branches are thinned and fairly set off. They will take their natural forms without further assistance from the pruner.

The sorts are arranged in the order of their ripening; which is a point always to be regarded in writing a catalogue of fruits.

1. *Jaune Hative P.*—Ripe from the middle to the end of July. This is the early yellow of the French, and the white primordian of the English gardens. This fruit is chiefly valued for its earliness, being the first to appear with the apricot.

They are small, oval, and of a light yellow colour, within as without, and with a tolerable share of agreeable juice. The stone is small, and from which the pulp parts freely.

The tree will answer on any aspect, but one or two should have places on a south wall, to forward the fruit as much as possible. They require but a small space, and when in flower may be covered like other wall trees. It is a good bearer, but should never be allowed to carry too much fruit at any one time; as this is hurtful to the present, as well as to future crops. Defructification should be exercised for the well-being of all plum trees, as well as all other kinds of trained fruit; so need not be again repeated. As what is called the bloom on plums has a rich appearance at table, care should be taken that it be not rubbed off in gathering.

2. *Early Red or Blue Primordian P.* — This plum comes in very quickly after the preceding, and should have a place next to it on the same aspect, in order to continue the supply till succeeded by others.

The fruit are rather larger than the last, but much the same shape. The colour a deep red, with much bloom of a bluish cast. The flesh is yellow, pretty juicy, and of a peculiar, though pleasant flavour. This variety is not mentioned by any of the early French writers, but is described by Parkinson two hundred years ago.

3. *Precoce de Tours P.* — This is a French plum introduced here many years back, and is much re-

garded for its earliness, being fit for table at the end of July.

The fruit are larger than either the two preceding, nearly oval; colour dark blue or purple, thickly covered with violet bloom. The flesh parts from the stone, which is small; is yellow, and of a very pleasant flavour.

This plum is very differently described by some modern authors, and which is another proof of the defective state of many of our fruit lists.

The bloom of this variety is its greatest ornament; which if it happens to be rubbed off in carriage, or in gathering, may be recovered by covering the fruit for a few hours with nettle tops.

4. *Morocco P.* — Ripe in the end of July and beginning of August. This is called the early black damask by the French; how it got the name of Morocco here is uncertain. It is a fine looking fruit, but of inferior quality. They are about the middle size, and nearly round; colour dark purple, covered by bluish coloured bloom; flesh greenish yellow, not freely melting, with acid juice, and altogether of second-rate quality. The riper it is when gathered the better; does well on an east or west wall; and gives variety to the dessert.

The Morocco grows to a handsome standard, and being a prolific bearer, answers the purpose of the market gardener well, it always meeting a ready sale. There is another plum allied to this, called the little early black damask; it is a better fruit

than the Morocco, but not so large ; if intended for the dessert it should have a wall, as it is too tender for a standard in the open ground.

5. *Violet Hative P.* — Ripe about the middle of August. The fruit are oval, rather small, and when ripe of a dark purple, thinly covered with azure bloom. The flesh is green (an unusual tint for a plum), the juice tolerably abundant, sweet, and well flavoured. It is one of our best bearers ; and therefore a profitable sort wherever planted. It makes a good healthy standard, though of moderate growth.

6. *Azure Hative P.* — Is the early blue gage, ripening about the middle of August. It is called gage from its resemblance in shape to the green gage. The fruit are rather below the middle size ; colour dark blue covered with a fine bloom ; juice tolerably abundant, but not high flavoured. The flesh adheres slightly to the stone, which is small for the size of the fruit. A west wall is the best aspect for this plum, not being hardy enough for open standards.

6. *Wilmot's Early Orleans P.* — Ripens about the middle of August. There have been two or three new varieties of the Orleans plum brought into notice lately. They are all similar in habit to the old sort ; but of these, Wilmot's is decidedly the best. The fruit are full the middle size, rather rounder than the old one, with a deeper furrow ; colour dark red next the sun, lighter where shaded. The pulp is light yellow, tender and melting, the juice rich and abundant. The fruit are greatly improved by being trained on an east or west wall. The pulp parts

freely from the stone, which makes it a favourite with the cook and confectioner ; and not less so with the market gardener, who finding it a free grower and a good bearer prefers it to the old sort, which consequently is less in demand than it formerly was.

7. *Drap d'Or P.*— Comes in about the middle of August, and is one of our best dessert plums. The fruit are small, round, and remarkable in having a dimple at each end. The colour is a rich yellow, spotted or streaked with red. The pulp is also yellow, rich, melting, and charged with pleasant juice, and parts from the stone. The tree is healthy though of weakly growth ; and is best on an east, west, or south wall. The crop often require thinning.

9. *Fotheringham P.*— Ripens with the last. The fruit are full middle size, oblong shape ; colour a deep mottled red next the sun, dotted all over with various sized specks, bearing a purple bloom. The pulp is yellow, parts from the stone, with a plentiful well-flavoured juice. It is in general a good bearer, and forms a handsome healthy tree in any shape, for standards particularly, as well as espaliers. The fruit are greatly improved by having the assistance of the reflected heat of a wall.

10. *Luccom's Nonsuch P.*— Ripens in the end of August. This probably originated with Luccomb of Exeter. He has given it a name, which, though not quite correct, is attractive. The fruit resemble the green gage ; but it is yellower, and the pulp, which adheres to the stone, is light green, not so melting

as the gage, though the juice is abundant, and of a very agreeable flavour. From the robust growth of the young trees, they promise to make good standards, and in that character are deserving the notice of the market gardener.

11. *Green Gage P.* — Ripens with the foregoing. This is a real nonsuch plum, and so has been regarded ever since its introduction into this country. It is the Great Queen Claude of the French orchardists, and got its English name from an unlabelled plant of it being received by the Gage family from the Chartreuse Garden at Paris. The fruit are of a round handsome shape with a slight furrow, full middle size, the stalk short and thick, the side next the sun mottled purple and brown, and lightly powdered with a light blue bloom. The pulp is green, melting, and of exceeding rich flavour, nearly but not quite quitting the stone. The fruit are in highest perfection before they are quite ripe.

The tree is healthy, fit for training in any way, and forms fine standards. It is a prolific bearer, and more so when old than when young. When on walls, the fruit should be thinned as regularly as apricots are. There are some spurious sorts of the green gage crept into English nurseries, which should be guarded against; and great numbers of the little Queen Claude are imported from France, and disposed of in this country as the true green gage. But these fruit are easily detected by judges: they have not that fine red-and-brown mottled cheek which the true sort have; neither is the flavour

equal. The only fault of the true green gage is its liability to crack in wet weather.

12. *Orleans P.*—Ripens about the middle of August. This, if not the best, is certainly the most prolific and profitable of all its tribe. Being so well known, it needs no description; but it cannot be too highly recommended as a useful fruit for the cook and confectioner: and from walls, in fine seasons, it is not to be despised in the dessert.

13. *La Royale P.*—This ripens about the end of August, and for richness of flavour is next to the green gage. The fruit are full middle sized, oval, or pear-shaped; colour light purple on the outside, and bearing a blueish bloom. The pulp is fleshy, yellowish, parts partially from the stone, and abounding with juice of excellent flavour. The growth is delicate though healthy, producing rather weak shoots of a whitish colour. It is only fit to be trained as a dwarf on a south aspect, in which situation it bears so well as to require thinning. When ripe, it must be protected from wasps: it will hang on the tree till it becomes shrivelled, and then may be preserved as a sweetmeat. When these or any other fruit become scented in ripening, they naturally attract flies; in which case soot, sprinkled on the border beneath, serves as some protection.

14. *Blue or Black Perdrigon P.*—Ripens about the end of August, but continues on the tree three weeks or a month afterwards. The fruit are below the middle size, oval, and a little pointed towards the stalk; colour dark purple when ripe, and thickly

powdered with blue bloom. The pulp is yellow, rather clings to the stone, is rich, and highly-flavoured. The fruit will become dry on the tree, and then have a taste like dried grapes. Unfortunately the tree is a very indifferent bearer, without great care to protect its early flowers; and even then the crop is precarious. It is a delicate growing tree, and bears its fruit on the youngest spurs, a succession of which must be preserved by the pruner.

15. *Nectarine P.*—So called from its resemblance to that fruit. It ripens about the middle of August if on a warm wall, but later as standards. The fruit are large, globular, and shaped like a nectarine; colour purple, with a fine bloom; pulp yellowish, and slightly adheres to the stone; juice, though not very abundant, is rich and well flavoured, and deserving of a place in the dessert. This plum is of recent introduction, and in the Horticultural Society's Catalogue is called Howell's Large; and has been proved, in the Chiswick garden, to be different from the Goliath, another new plum lately brought into notice.

16. *Purple Gage P.* — Ripe about the beginning of September. This fruit has been introduced by the Horticultural Society. The fruit are of the middle size, and like the green gage in shape; the colour purple; pulp greenish white, adhering a little to the stone, and very well flavoured. This description is of fruit borne on a standard; and the writer thinks

it would be improved by a wall. It is recommended as a profitable sort for the market gardener.

17. *White Perdrigon P.*—Ripens at the same time with the preceding. This is an old inhabitant of our gardens, and is one of the various Perdrigons which are dried in France, and exported as sweet-meats under the name of Brignole prunes.

The fruit are about the middle size, oval, and a little pointed towards the stalk; colour a light yellow, with a few red spots on the side next the sun. The pulp is greenish yellow, firm, does not leave the stone freely, is juicy, and finely flavoured. The tree is a good bearer, but requires a wall to have it in perfection.

18. *Apricot P.*—So called from resemblance. Ripens from the beginning to the middle of September. The fruit are large and nearly round, with a deep furrow; colour yellow, sometimes tinged with red next the sun, with a thin white bloom on the surface. The pulp, though firm, is melting, and quits the stone, yielding an agreeable, sweet juice.

The tree takes a handsome form on a wall, and is generally a good bearer.

19. *Roche Corbon P.*—Ripens about the middle of September. This is a first-rate dessert fruit; is large and oval; colour dark red on the exposed side, and thickly spotted with brown, and powdered with azure bloom. The pulp melting, slightly adhering to the stone; the juice abundant, very rich, and high flavoured. The tree is not vigorous, but forms

a handsome wall tree, and is in general a prolific bearer. The fruit growing sometimes in clusters, require thinning. A south or south-east aspect is the most suitable, and where the fruit will continue for a month in gathering. This, like many other fruits, has had a plurality of names, both in French and English catalogues, which causes much trouble and blame to nurserymen.

20. *Kirke's P.*—Ripe from the beginning to the middle of September. This plum was introduced by a nurseryman whose name it bears. The fruit are full the middle size, nearly round, with a slight lateral furrow; colour dark purple, covered with a fine blue bloom, not easily rubbed off. The pulp is yellowish, firm, and parts freely from the stone; melting, juicy, and well flavoured. It bears well as a standard or against a wall, and grows up a handsome tree. This sort should be in every collection.

21. *Coe's Golden Drop P.* — Ripens toward the end of September. A fine popular fruit, raised by a person whose name it bears, a nurseryman at Bury, in Suffolk. The fruit are of the largest size, oval, yellow colour, with various red spots on the side next the sun. The pulp is slightly yellow, adhering to the stone; juicy, and of superior flavour. In growth the tree is vigorous, producing strong shoots of a remarkable brown colour, and with prominent buds which soon produce flowers.

Although the qualities of this fruit, when perfectly ripened on a wall, entitle it to a place in the dessert,

yet its great size gives it a non-inviting appearance at table ; it requiring too much slicing to be pleasantly partaken of. The tree is a prolific bearer, the fruit being often produced in clusters, and which require thinning, as much for the sake of the tree as for the reserved fruit.

22. *La Delicieuse P.* — Ripens about the end of September. This is a plum of American origin, introduced into the London nurseries a few years ago. The fruit are middle sized, and of an oval shape ; general colour a light yellow, purplish on the sun side, with numerous specks. The pulp is also yellow, and parts from the stone ; juicy, and of very rich flavour. The tree requires a south or south-east wall, where it grows and bears well. Whether it will do as an espalier, the author can give no opinion, as he has not had sufficient experience of its merits.

23. *Blue Imperatrice P.* — Ripe from the end of September to the beginning of November. This favourite plum is of French extraction, and has been long in English gardens. The fruit are middle-sized, oblong, and of a dark blue colour, thickly powdered with a whitish bloom not easily rubbed off. The pulp is yellow, clings to the stone, and is of exceedingly rich flavour, especially after it becomes shrivelled on the tree.

The foregoing are what are usually called dessert plums. The following are more for the use of the cook and confectioner ; and are, in the diet of either rich or poor, fully as useful as any of the others.

24. *St. Catherine P.*—Ripens about the beginning of October. This plum is in high repute for preserving; and where they are particularly required for family use, a tree or two should be trained on a south wall. The fruit are full the middle size, of an oval shape, and pale yellow colour powdered with a whitish bloom, the side next the sun dashed with a little red. The pulp is firm, and adheres to the stone; juice not very abundant, but sweet and agreeable. As a standard, the tree is healthy but never large; and in favourable seasons bears large crops.

25. *Brignole P.*—This is one of those plums, which are extensively cultivated in France for furnishing the *prunes* of commerce. The fruit are full middle size, sometimes large; general colour yellow, with faint touches of red next the sun. The pulp is substantial, and well flavoured when quite ripe. It may be planted as a standard, and does well as an espalier.

26. *Red Magnum Bonum P.*—Ripens about the middle of September. This plum was long cultivated under the name of Imperial. Miller changed it to the above name, by which it is now most commonly known. The fruit are large and oval; colour deep red, bearing fine bloom. The pulp is dry, parts from the stone, and is a good fruit for preserving.

This variety is sometimes substituted for the *La Royale*; an error which should be guarded against as well by seller as buyer.

27. *White Magnum Bonum P.*—Ripe from the

middle to the end of September. No plum has been more cultivated than this; and though it be chiefly used by the confectioner, it is nevertheless a very rich fruit, when thoroughly ripened on a south wall. From the shape and colour, it is called the Egg plum. The pulp is yellow, firm, partly melting, but adhering to the stone, which is large and pointed. The tree bears well in any shape, either as standards in the open ground, as espaliers, or on walls of any aspect. If intended for standards, it should be worked on the Brussels stock trained for the purpose. On an east or west wall it should be allowed a space of twenty-five feet.

28. *Wine Sour P.* — Ripens end of September. This is a plum of true English origin, being found wild in the woods round Rotherham in Yorkshire, and in other places in the north of England. It is only useful for preserving; for which purpose the fruit are highly esteemed. It is somewhat larger than the prune damson; colour dark purple; pulp yellowish, and adheres closely to the stone; juice acid, and seldom ripening so much as to be fit for eating.

When domesticated, it grows to be a middling sized tree, but retains some of its wild character, in having spines on some of its young shoots. It is always planted as standards, and worked on the plum stock.

The five last sorts are such as are chiefly used for baking and preserving, as already mentioned. It

only remains to make a few more remarks on the varieties of the plum which are used as stocks for other trees.

29. *The Muscle P.* — So called from the colour and shape of the fruit. It is a wild sort; but where it was first found is unknown. It has, however, been used as a stock for peaches and nectarines for these last one hundred and fifty years. The fruit are of inferior quality; but, when fully ripe, are by no means disagreeable. The cottager should plant this as well as the next in the hedge of his garden.

30. *Brussels P.* — This is the St. Julien of the French and German nurserymen, and has been long used as a stock in English nurseries. The fruit are about the size and shape of the Morocco; colour dark red, or purple. The pulp parts from the stone, and though it has but little juice, it is not bad tasted when fully ripe; but the tree must be old before it bears fruit. In the Horticultural Society's Catalogue, it is said to be "used as a stock for peaches;" this is contrary to the long experience of the writer, and also to the opinion of the author of "The Guide to the Garden and Orchard."

31. *Pear P.* — So called from the shape of the fruit. A wild variety, propagated by layers to form proper stocks for the more tender kinds of peaches. Miller says, it is a good fruit for preserving; and so it may, but the young planter may die an old man without seeing a fruit on the tree.

32. *Prune Damson P.* — Ripens in the end of September. This is an improved variety of the

common, being larger and more fleshy. It is by some preferred for its size, but is not so good a bearer as the common. It is best worked on the Brussels stock.

33. *White Damson P.* — Has much the same properties as the last; in flavour a little superior, and propagated in a similar manner. It must be aged before it becomes a good bearer.

34. *Common Damson P.* — This is, perhaps, the most useful of all the plum tribe, not only to the growers, but to the consumers of this favourite fruit. Damson pies and puddings are universally used in the season; and are one of the cheap luxuries of the cottager's board. The best and most fruitful trees are raised from layers, and far preferable to those found wild, or propagated in any other way. The Kentish farmers make a great deal of money by their crop of damsons grown in the hedges round their fields, as well as from whole orchards of this tree planted in many places in that and other neighbouring counties. Wine and several kinds of sweetmeats are also made of the fruit.

35. *White Bullace P.* — Needs but a few words. They should be raised from layers; but to improve the fruit, and have handsome trees, they should be grafted standard-high, on the muscle stock. The fruit should be allowed to hang as long on the tree as consists with their safety from frost; as they are far from wholesome, if dressed in their crude state.

The foregoing list of plums comprises all the best

and most serviceable kinds which the writer has cultivated, and selected out of a crowd of others said to be in existence. There is certainly variety enough for any establishment; and no doubt many will think that the above list, meagre as it is compared with others, might be improved by reduction. For a small garden, the writer would recommend only about five varieties for a regular supply of the table, *viz.* *Précoce de Tours*, *Wilmot's early Orleans*, *Green Gage*, *Kirke's*, and the *Imperatrice*. These are all choice sorts and good bearers, seldom disappointing the cultivator if but ordinary care is bestowed.

There is an ornamental plum, called the *myrobalan*, to be met with in nurseries, otherwise called the *cherry plum*. As a curiosity, it is worth a place in the shrubbery.

SECT. XXII.

OF THE QUINCE.

There are three varieties of this austere fruit, *viz.* the apple-shaped, pear-shaped, and the *Portugal*. The last is the only sort worth cultivation. The fruit are much swelled near the eye, and tapering bluntly to the stalk. The pulp is whitish, but changes to purple when dressed. It is made into marmalades; and only used as a condiment to heighten the flavour of other fruit in cookery. Young plants are raised

by layers, but they root slowly, remaining two years on the stool, and afterwards gaining standard height very tardily. The quince delights in a rich moist soil, where it produces large fruit, but of inferior quality to those produced on dry soils.

Seedlings of either of the three sorts make the best-rooted stocks for the pear: but require two or three years more than the layers before they are fit for the graft. A kind of medicinal wine is made from the quince in considerable quantities in some parts of the county of Sussex. It is used by asthmatic patients.

SECT. XXIII.

OF THE RASPBERRY.

The raspberry is found wild in Britain, and, like all her other native fruits, has been, by art or high cultivation, brought to great size and excellence. In Miller's time there were only three improved varieties, *viz.* the early and late red, and the old white. Soon afterwards, however, several new sorts made their appearance; one or two direct from Flanders, and as many raised in England; so that we have now half a dozen very good sorts.

The raspberry will grow in any kind of kitchen garden soil, if it be moderately rich; but a light free loam of moderate depth seems to suit it best, especially if it be now and then refreshed with a light

dressing of well rotted dung. An open situation is necessary for the perfect ripening of the fruit, for without full air and light it never gains its true flavour. For the same reason the plants should never be too near together. If a quarter is to be planted, the rows should not be nearer than six feet; and four feet apart in the rows. The plants require some kind of support; either single stakes driven into the centre of each plant, and to which all the bearing wood, or canes, are loosely tied; or ledges are tied or nailed to the stakes, about three feet from the ground, and to which the shoots are tied at regular distances apart.

The rows of plants should always stand north and south for the sake of obtaining more sunlight; and the rows being single, there is no constant obstruction to either the light or heat of the sun.

In pruning the raspberry, rejecting the old and choosing the young shoots is the whole business. As the plant is apt to wander away from its first station, those shoots which are nearest the old centre should be preferred, and the rest cut away. Six shoots to a plant or stool, are enough among the rankest growing plants; among young, or weakly plants, a less number must suffice. The height at which the bearing shoots should be pruned must be left to the judgment of the pruner. They produce fruit from two to five feet high if required, but from three to three and a half feet is about a medium height. The varieties are as follow, *viz.*

1. *Wilmot's Early Red R.*—This variety ripens a few days sooner than any other; on this account it is desirable either for the private table, or public market. The fruit are of a fair size and good flavour; and may be much forwarded if planted on any vacant spaces of a south wall. By such attention ripe fruit may be had in the end of June: but if the season be dry, they will require frequent watering at the root, otherwise the fruit will be small. When raspberries are required for the dessert or other uses before they come in naturally, this will be found the best for forcing in pots or otherwise.

2. *Red Antwerp R.*—This is without exception the best in cultivation. It is of vigorous growth, hardy, and prolific. The fruit are large, and more substantial than other kinds, and adapted to every purpose of the cook, confectioner, as well as a superior dessert fruit. Market gardeners keep their plants short, and have fine crops; and late crops may be had by planting a row behind a north wall, or against vacant spaces of it, where raspberries may be had in great profusion after the crop in the open ground is over. The canes or shoots of this variety are almost smooth.

3. *Yellow Antwerp R.*—This fine rich looking fruit was introduced by the late Mr. North, of Lambeth. It is distinguished from others by its light coloured and rough shoots, and luxuriant growth. The fruit are always admired in the dessert.

4. *Brentford, or Gould's Red R.*—This, before the

red Antwerp was introduced, took the lead of all others, as well in the estimation of the cook and confectioner, as of the compounder of liquors. This variety, under good management, is but little inferior to the Antwerp; it resists moist weather better than others, and may be called a good family fruit. It is also one of the best for forcing.

5. *Double Bearing Red R.*—This is a new and much superior fruit to the old double-bearing of Miller. In favourable circumstances, this brings forth a second crop in autumn, nearly as great in quantity, and but little inferior in quality, to the first in the summer.

There is some care necessary in the management of this variety, as well in the choice of the bearing shoots, as cutting some of them away to give air and light to the late crop. Where a paling or wall, having a south aspect, could be spared for this fruit, it would much advance the ripening of the second crop.

6. *Barnet, or Cornwall's Seedling R.*—This new variety has some advantage over the red Antwerp in point of size, but in nothing else. Still it is an excellent raspberry, and deserves notice, it appearing to merit the high character given of it. Being raised from a seed, it will no doubt be the forerunner of a host of others.

SECT XXIV.

OF THE SERVICE TREE.

This, as a fruit, has never been much esteemed in this country. The trees are not early bearers; and being of slow growth, there are but few aged ones in full bearing to form a fair judgment of: and even in its best perfection, it is in this country inferior to the medlar.

The cultivated sort is the pear-shaped, which is a small fruit, borne on the points of the branches; and, when gathered, requires to be laid in the fruit-room till the pulp is in a state of decay, when it is fit for the table. Decay changes the crudeness of the juice into a mild acid, much more relished in warm countries than in this.

The true service cannot be raised from seeds. In this respect it is like our other orchard fruit, not one seedling proving like its parent. Young trees are raised by layers, and which make roots very slowly, as they remain on the stool for two years at least before they are fit for removal. Nurserymen are very seldom applied to for the plant.

SECT. XXV.

OF THE STRAWBERRY.

This fruit is very aptly named *fragum* by the Latins, and *fragaria* by botanists, expressive of the high and fragrant scent emitted by the ripe fruit.

When in full perfection, it is accounted one of the most wholesome ; and as its flavour is most grateful, it is universally esteemed.

From the different varieties now in cultivation, supplies for table may be gathered in the open air during seven or eight months of the year ; and, if desired, may be had by artificial means for the four remaining months. By a proper selection from the sorts hereafter described, and by following the directions herein given, the results alluded to may be obtained.

In the early part of the writer's life, the hautbois, the scarlet Virginian, and the Carolina, were the only sorts cultivated ; and of these most excellent crops were then produced. The first was superseded, in market gardens, by the Carolina, soon after its introduction ; but the hawkers in the streets have not abolished the name, for *hoboys* are still cried in the same tone they were seventy years ago. True it is, several very superior varieties have been lately raised ; but it is a question whether any of the new are really superior in flavour to those above-mentioned. That the new ones are larger, some of them more prolific, and consequently more profitable, must be admitted ; but whether they will maintain their present characters as long as the old sorts, is perhaps doubtful.

1. *Duke of Kent's Scarlet S.* — Ripens about the middle of May, or about eight or ten days sooner than the scarlet Virginian. The fruit are under the

middle size, and nearly round; colour scarlet; the pulp solid, juicy, and high-flavoured. It is an abundant bearer; and when planted on a sloping bank or border, its natural earliness is expedited, and it is consequently a welcome addition in the dessert.

The most suitable soil is a mild, kindly loam, not too much enriched with rank dung. They may be either planted in single rows, or in beds three feet wide, to hold three rows at one foot distance apart, the outside rows being six inches from the sides. The plants in the rows to be set at nine-inch distances from each other. This order of planting will give room enough for the enlargement of the plants, and to allow of the culture and management necessary for them during the three years they have to stand; for strawberry plants are not worth preserving after the third year. Of course beds should be made in every year to succeed those that are worn out. If several such beds lie parallel to each other, alleys of eighteen inches must intervene, to allow weeding, stringing, watering, and gathering the fruit.

This variety is also called the Austrian. Is this the Canadian name? If not, why should the sort introduced from that country by his Royal Highness not bear his name as a slight memorial, or why should it be changed to that of the Austrian?

2. *The Old Scarlet Virginian S.*—This, as already mentioned, is an old favourite fruit, and has been as useful, whether planted in the natural ground or forced, as any other sort in cultivation. The fruit

are of middle size, somewhat pointed; colour bright scarlet; pulp firm, and finely flavoured. It is a good bearer, and ripens soon after the preceding.

3. *Grove End Scarlet S.*—This variety originated with a Mr. Atkinson, of Grove End, near London. It is valuable as ripening a little later than the foregoing, to which it is a good successor. The fruit are full the middle size, well shaped, and of a bright red colour. The pulp is rather firm, juicy, and in flavour like the Virginian. It is a good bearer, and well worth cultivation.

4. *Lewisham Scarlet, or Cluster S.*—This is a new sort, and was raised some years ago in the nursery of Mr. Wilmot, of Lewisham. The fruit are rather small, round, and produced in clusters; colour dark red; pulp firm, and resists the bad effects of wet weather better than some others. It is prolific, the fruit ripening in succession for a considerable time; but they should be perfectly ripe before sent to table.

5. *Godfrey's New Scarlet S.*—This variety was raised from seed by a person whose name it bears, and was introduced into the trade through the Southampton Nursery, where it has given the greatest satisfaction. It is called new, to distinguish it from the Methven Castle, a variety of very inferior quality. The fruit of the New Southampton Scarlet—our present subject—is of middle size; colour dark red; pulp firm, and full of a rich vinous juice: one of the best for jam, and an abundant bearer. It does best in a loamy soil, not too light.

6. *Roseberry S.*—This is of Scottish origin. It is

rather of peculiar habit, the foliage being short and compact. The fruit are large, and a little pointed; colour pale scarlet; pulp substantial, and charged with a fine agreeable juice. It is a good bearer in the open ground, and particularly eligible for forcing. As this variety produces fruit near the ground, straw, grass mowed from the lawn, or other soft matter, should be laid round the plants before the flowers come forth.

7. *Wilmot's Late Scarlet S.*—The fruit are large; colour light red; the pulp firm, with a little hollow in the centre. The juice is but of middling quality; and, as a bearer, may be called second rate. It, however, continues long in gathering, and from its size makes an inviting dish in the dessert. There is another variety very like this, called Knight's Large Scarlet, of similar size, colour, and qualities, needing no further description.

8. *Pitmaston Black S.*—This fine new strawberry was raised by J. Williams, Esq., at his seat near Worcester, a gentleman who has dedicated much of his time to the improvement of horticulture, and in many things has been eminently successful. The fruit are full the middle size, and somewhat oval; colour deep red, internally as well as externally; pulp firm, juicy, and finely flavoured. It is late in ripening, and therefore the more valuable, as it succeeds the earlier sorts most conveniently. It should be in every garden; and, if possible, planted on rich hazel loam, but without dung, except as a slight top dressing.

9. *Downton S.*—This is another triumph of the skill and perseverance of the ingenious proprietor of Downton Castle, in Herefordshire. The growth and habit of this variety is conspicuously different from any other sort, the footstalks of the leaves being unusually short, and the disks a shining green. The fruit are large, various in shape, and of a deep red colour: flesh also coloured, firm, melting, and high-flavoured. It has been observed of this sort, that for the first and second year it is prolific, but fails to bear afterwards, though the plants are enlarged. From this circumstance a practical lesson is derived, *viz.* never to keep the plants longer than the second year. Neither does this variety produce many runners; such as are produced must be taken good care of, and let remain where they are produced, till they are sufficiently strong to be removed to the final station. This strawberry seems to thrive better on a moderately light loam, than on that which is moist and heavy. The trusses of fruit are borne on long footstalks, and which, with the weight of the fruit, fall on the ground on the outside of the leaves, and then are liable to be spoiled; to prevent this, the trusses should be propped with, and tied to short sticks, which much improves the fruit both in flavour, and being free from grit. Other sorts may be preserved clean, and out of the way of slugs by the same means.

10. *Old Black Pine S.*—This is named from its conical shape, and deep red colour. The fruit are

full the middle size, generally pine-shaped, but some are globular; pulp firm, coloured, melting, juicy, and richly flavoured. It is a very prolific bearer, and is certainly one of the best of the pine varieties. In making a plantation of this sort, it should be allowed more space than is required by the Virginian.

11. *Old Carolina S.*—No variety hitherto introduced into our gardens, has been more esteemed than this; the fruit are large, and of various shapes, some round, others conical; colour scarlet, the flesh is coloured, which, with the juice, is of a fine vinous flavour. It is a good bearer, and when produced in clusters, should be tied up. This being a strong growing sort, it requires a good rich loam, rather moist than otherwise. This, as well as every sort of strawberry, requires copious watering in dry weather; without moisture the fruit do not set kindly, or if they do, never swell to any useful size.

12. *Keen's Seedling S.*—This is one of the best new seedling strawberries. Mr. Keen has been fortunate in raising two good sorts, viz. the "imperial" and the "seedling," the latter being the best. The fruit are of large size, and variously shaped, but mostly round; colour dark scarlet, the pulp substantial, and bears carriage well, coloured, and of rich flavour. It is a good bearer, producing the fruit in clusters, and which require tying up. It is moreover an excellent sort for forcing, yielding fine crops during April and May, with but little expense

or trouble. When planted on beds, or in quarters, it should be allowed plenty of room, as it is a vigorous grower, and affects a good rich loam.

13. *Chili S.*—Though this is a very old sort, it has never been much valued except for its size and late ripening, which, when planted in strong land, and in a shady situation, do not appear at table till the middle of July. The fruit are very large, irregularly shaped, colour brownish white, with a little red on the sun side. The pulp white, very firm, and hollow at the centre; flavour rather flat, especially when fully ripe. It is of vigorous growth, with large thick leaves, and an uncertain bearer; but if planted on a north border, and allowed to run together, good crops are sometimes produced, and are always acceptable as coming in when perhaps there are no others. This strawberry is now seldom cultivated.

14. *Wilmot's Superb S.*—This title is not extravagant, as it is certainly the largest and most beautiful strawberry now in cultivation. In habit, it resembles the Chili, but excels it in size of fruit. The shape is somewhat irregular, having large prominences on two or three sides, and arriving at the weight of one, sometimes two ounces, when highly cultivated. The colour of the fruit is a shining red, a little shaded with a deeper colour. The pulp is also coloured, firm, and almost solid; the flavour excellent. It is a good bearer, producing its fruit on strong stems, and mostly clustered; some of these, however, are much better for being tied up. A fresh soft loam is best for this variety, requiring

no rich dung, but only occasional top-dressings. The stools should be frequently cleared of runners, and none left on except they are wanted to form new plantations, which, however, should be made every other year.

15. *Hautbois S.*—So called, as is supposed, from being found wild in the high woods of Bohemia. The fruit are about the middle size, round, and somewhat depressed; colour dark red when exposed to the sun, otherwise dull white: pulp is substantial, greenish, very sweet, with an agreeable musky flavour. When quantity rather than quality is wanted, letting the runners remain to cover the whole surface of the ground, is not a bad plan; as in this way the plants renew themselves, and continue to yield fair crops for years together without other assistance than occasional top-dressings of old hot-bed dung. This strawberry does not require so heavy land as some of the others; a light sandy soil, moderately rich, and kept so by biennial applications of manure, will suit the plants well.

It has been lately supposed, that this variety of strawberry is dioecious, that is, having distinct male and female plants; and that the latter are barren, if there be none of the former planted among them. This is a discovery which poor Linnæus never dreamed of, when arranging his class Icosandria, nor that Jussieu detected among his Rosaceæ. Such a circumstance was never heard of or regarded in the author's early days, neither was there then any complaint of unfruitfulness. That some of the flowers on

every plant are occasionally defective, or *blind* as they are called, is perfectly true; but it has never been noticed that the same plants are constantly so, at least so far as the writer has observed.

Within these few years there have been three varieties of the hauthois brought into notice, *viz.* the globe, the flat, and the prolific; the qualities of each are, however, much like the old sort, differing only in shape. One of the best is the—

16. *Prolific S.*—Fruit large, swollen at the base, and diminishing toward the point: colour dark red, pulp solid, greenish, and of a fine musky flavour. It is, as the name imports, a good bearer, and in some seasons yields a second crop in the autumn. The plants are only serviceable for three years, being in their prime in the second. New plantations should therefore be made every second year. A slight dressing of well-consumed dung is useful to the plants in the two last seasons.

17. *Green Pine S.*—Small but high-flavoured fruit, pine apple shape, not a very good bearer: but as it is admired for its peculiar flavour, beds may be planted with it in light warm soil, and in an open situation. Being of diminutive habit the plants may be dibbed in six inches apart and let to run together, or kept separate, as convenience may direct.

18. *Red Wood S.*—This and its congener the white wood (the later but an indifferent bearer) are natives of this country, and sometimes introduced into gardens by those who relish their sweet tartish taste. These sorts are readily raised from seeds

sowed as soon as ripe, and cleared of pulp; and in the following spring the seedlings may be bedded out where they are to stand for good.

19. *Red Alpine S.*—This variety is said to have been received from the north of Italy. It is principally useful as an autumn fruit; for though they begin to ripen in summer, they cannot vie with others then in season, but when the best are over, the Alpine is acceptable. They are usually planted on a north border and let run together, doing better there than in full sun. This strawberry is frequently, because easily, raised from seed. The seed is procured from the best ripened fruit in the autumn, washed clear from pulp, dried, and kept dry till about the middle of March, when it should be sown. Soon as the seedlings are fit to handle, they should be transplanted into beds, or into pots for early forcing, for which purpose they answer very well. Seedlings produce finer fruit than runners, more especially for forcing; and in some places seed-beds are annually made for the purpose.

20. *White Alpine S.*—This is no doubt a sub-variety of the above, but it has not the merit of bearing fruit so late in the autumn. Its fruit, however, are rather larger, and not quite so tart. It is propagated by runners, and planted out in the same manner, and on similar soil and situation as are advised for the wood strawberry.

The above twenty sorts are a selection out of many others now in cultivation, and which, in the writer's opinion, are variety enough for every purpose to

which this kind of fruit may be applied. It only remains for him to append a few more general observations and advice relative to the culture of this favourite fruit.

And first in respect of raising new varieties from seed, it is a fully established fact, that, from the success which has attended the exertions of Mr. President Knight, Mr. Williams, Mr. Wilmot, &c., the process is no longer doubtful; and notwithstanding our late acquisitions, we may still look forward to even more important results than have yet taken place. Every one, therefore, who has leisure and inclination, may amuse themselves with raising seedlings, whence, probably, a sort or sorts may be raised superior to every one yet known.

But the most common and easiest way of obtaining young plants, is by transplanting the runners which the old plants naturally produce. The strongest of these are chosen after they have formed their own roots, which they readily do if lying close to the ground. But as it is an advantage to get them off the stools as soon, and as well rooted as possible, some cultivators make small pits, or plunge small pots filled with fresh cucumber compost, on which the best runners are laid and pegged down, having their points pinched off. Here they soon make strong roots, and ready to be taken off to be planted where wanted, either in single rows, nine or twelve inches asunder, or in quarters, at eighteen inches apart every way. Or if required for forcing, those rooted

in small pots may be shifted into larger, and put away in a proper shady place till they are wanted to go into the forcing house, strawberry pit, or hot-bed.

Mr. Nettleship of Twickenham was formerly the most extensive and most successful grower of strawberries, which he forced for the supply of the London fruiterers. For this sole purpose, he had long ranges of houses, built at a great expense, but which he made answer. The writer has often observed in Mr. Nettleship's practice, that if he run short of potted plants, he would pot old stools, which went into the house at once.

Strawberries, whether in the open air or forced, require constant refreshments of water, and on no account should be allowed to get dry, from the time they show flower till the fruit are ripe. And as these last are very liable to be rendered unfit for table, from earth being dashed upon them by heavy rain, many schemes have been executed with the view of keeping them clean. Some of these have been already alluded to; but others may just be noticed:—one plan is to lay slates or plain tiles along both sides of the rows of plants, on which the fruit lie and ripen; this not only keeps the fruit clean, but expedites their ripening, and improves their flavour. Some people of fortune, who are particular in their fruit, have their strawberry beds formed of brickwork, in the form of a ridge of graduated steps, on which interstices are left for the

reception of the plants. Along the ridge a channel is left, into which water is occasionally poured, and which percolating down the sides keeps the soil beneath the bricks in a proper state of dampness, so necessary to their growth and prolificacy.

In the management of strawberry beds, or quarters, in the open ground, some advise digging between the plants in the autumn every year; others condemn this practice, and say the hoe only should be used; perhaps both are wrong; neither is deep digging necessary, nor is the action of the hoe sufficient; pointing-in the surface with the remains of the litter that was round plants, is certainly requisite for the fresh roots to strike into, as well as to bury weeds.

Strawberry plants may be made to produce their fruit out of season. This is done by picking off *all the first flowers*; by which means the flowers which would not otherwise have come forth till the spring of the next year, come forth in the autumn of this. By this manœuvre, late fruit are had at a time when they are highly valued, though perhaps of not so high a flavour.

The gathering and carriage of strawberries in the season, gives employment to great numbers of young women about London. The carriers are chiefly Welch girls, who bear on their heads large baskets filled with pottle-chip measures, in which the fruit are gathered, and sold to the buyers.

SECT. XXVI.

OF THE WALNUT.

Of this well-known timber and fruit tree little need be said. The different sorts known in this country are raised from seeds, of which there are many varieties ; the principal kinds being the large double, the thin-shelled, and the egg-shaped. But these, even if sowed, seldom prove true to their kind, or parent tree on which they were produced ; we have consequently many intermediate varieties, differing in size, shape, and quality.

The soil most congenial to this tree is a light sandy loam, on a dry bottom of either gravel or chalk. On the chalk hills of Kent they are extraordinarily prolific, and are disposed of in great quantities at Croydon Fair : the prices there obtained generally rule the London market.

Threshing the nuts off the trees with poles or rods is the common expedient ; by which many of the points of the shoots are broken, causing the production of many spur-like shoots, which afterwards bear the flowers and fruit. Hence the custom of beating a barren tree to make it bear.


The nuts should not be gathered till the outer covering parts readily from the shell, which is before the former becomes mealy. There is a critical time at which the covering leaves the shell without staining it, which they are apt to do if allowed to

become soft. When shelled, they should be well dried in the sun for a day or two, and then stored away, either on shelves in an airy room, or packed in jars or boxes, among dry white sand, which improves the colour of the shell, and keeps the kernel more moist.

A decoction of walnut leaves is sometimes useful in gardens; it kills earth-worms: and if gooseberry trees are sprinkled with this liquor soon after the leaves are expanded, it defends them from the caterpillar.

CONCLUSION.

Here ends the description of nearly five hundred species and varieties of orchard and garden fruits ; nearly all of which have been propagated and cultivated by the writer himself, or under his immediate inspection. He dare not pretend to say that his opinions are infallible, or that his advice is the very best that can be followed, because, in an improving science like that of gardening, every day brings forth something new and valuable to be added to the old stock of knowledge ; but he can avow with great truth, that the results of his own practical experience are faithfully set forth ; and can promise those, whoever they may be, and particularly the young gardener, that in so far as the writer is considered a preceptor, his followers will not be disappointed. He will not be accused of improper vanity, if, on the principle — “ in the multitude of counsellors there is wisdom,” he thinks that his knowledge, gained during a patriarchal life of eighty-three years, may be a useful addition to what has been heretofore written on the same subject. His great exemplar and friend, Philip Miller, trod the higher walks of the profession, and enlightened posterity with his pen. His humble follower took a lower though not less useful flight, and has in the preceding pages, in imitation of his far more exalted prototype, endeavoured to leave behind him something to prove he has not lived in vain.



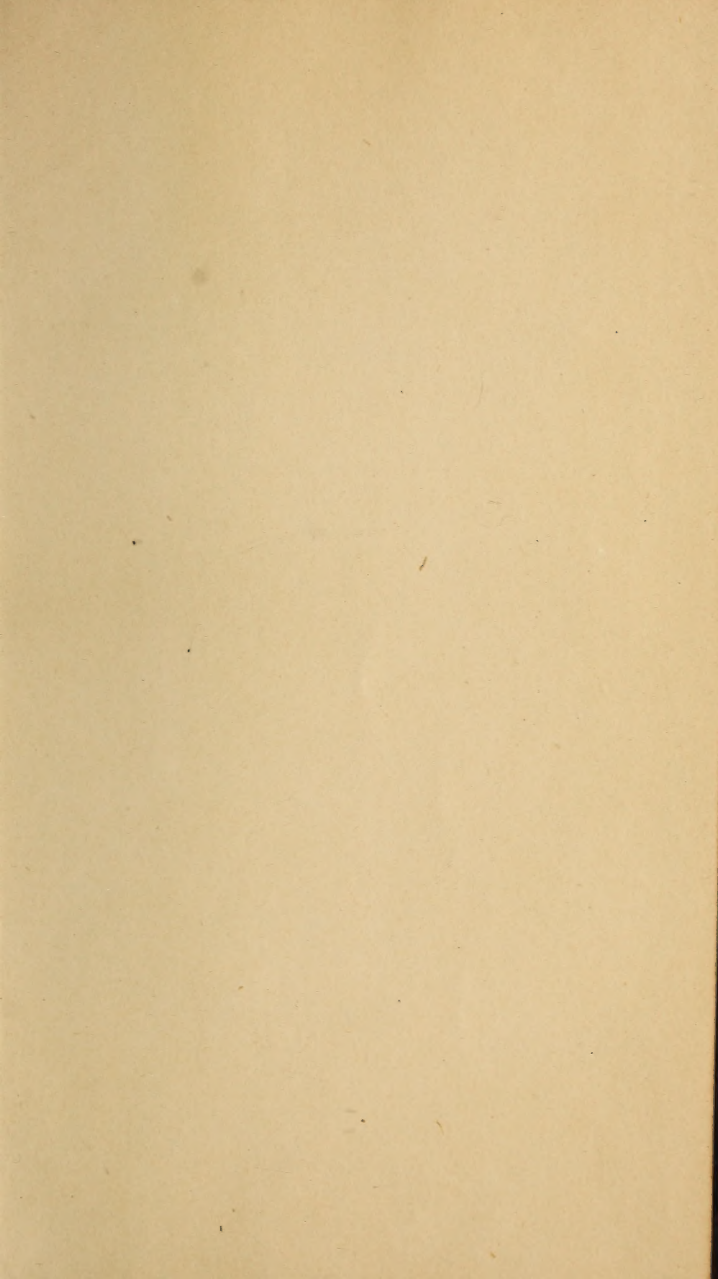
DIRECTIONS

For forming a LIQUID to prevent and remove insects and mildew from fruit trees ; and how to compose a POWDER to destroy the scale-like insect on pines.

About the beginning of March, get three tubs of one hogshead each. Let them be placed near where soft water can be conveniently had. Put into the first tub two pecks of hard lime fresh from the kiln, and fill up with water : let it stand for two or three days, stirring it occasionally. At the end of that time, and when the lime has subsided to the bottom, draw off the clear ley, and put it into the second tub, and immediately fill up the first tub again with water. When this last has stood twenty-four hours, it may be drawn off, and added to that in the second tub. This must be repeated, until there is one hogshead of clear lime-water. To this must be added the following ingredients ; *viz.* four pounds of flour of sulphur, and four pints of tobacco liquor, which may be purchased of the tobacconist. These ingredients being put into the second tub with the clear lime-water, may stand for a day or two, and then be drawn clear off into the third tub, when it is ready for use. When more is wanted, the same process must be repeated, adding a peck of fresh lime to the first tub on every repetition.

This liquor is a cure for trees, however badly affected by either insects or mildew; but it is best to use as a preventive in spring, as soon as the leaves are sufficiently expanded, or when the fruit are fairly set. A sprinkling given before the buds burst, is also a good protection against attack; but for this purpose the liquor may be lowered, and always applied before eight o'clock in the morning, in order that the trees may get perfectly dry before night. The liquid is easiest applied with a hand-engine or syringe; or, instead of these, a man on a ladder may throw it on the trees with a fine-rosed watering pot.

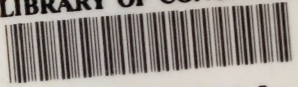
The Powder for the destruction of the scale insect on pines, is given under the description of that fruit.







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